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A TRULY VIRTUOUS WILL IS ALMOST OMNIPOTENT.

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## PART I. ORIGINAL COMMUNICATIONS.

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### ARTICLE I.

*Report of a case of Extra-uterine Fætation, in the Sow; with remarks on the nutrition of the Fætus, by ADDISON BEAN, M.D., of McDonough, Ga.*

IN studying the economy of nature, the human mind is astonished at the beauty and simplicity of her laws; at the peculiar adaptation of the means to the ends; and perhaps, above all, at the stupendous effects which result from the operation of apparently simple causes. For instance, the whole phenomena of animal motion are produced by the simple contraction and relaxation of the muscular fibres. Perhaps a more astonishing example is produced by the wonderful machinery of the planetary system; where we discover the whole retinue of planetary worlds, performing their ceaseless revolutions, with a velocity that almost outstrips fancy herself; and the cause of the whole is simple attraction and repulsion. But notwithstanding the laws of nature, when understood, appear simple and intelligible;—notwithstanding the human intellect can generally trace the cause from its effects; and from contemplating the cause can, with great probability predict the result; yet, we occasion-

ally meet with such extraordinary freaks of nature, with results so anomalous, that the utmost stretch of human ingenuity has never discovered the cause, nor the means, used in their production.

Among the irregularities of nature which the physiologist is called to contemplate, few are more wonderful than extra-uterine fœtation. When we consider the functions of the various organs subservient to conception, gestation &c., and the great regularity displayed by each, in the performance of the office assigned it, were it not for positive facts, the utmost stretch of our credulity would hardly permit us to believe such a thing as extra-uterine impregnation possible. But whether we shall ever be able fully to comprehend it or not, the fact is notorious; and perhaps there is scarcely a more singular case on record, than the one which I witnessed in December last, in a sow.

My friend Mr. M. who resides a few miles from M'Donough, when slaughtering his hogs, was surprised to find a pig of nearly the ordinary size of one at the full period of gestation, embedded in the fat which surrounds the cardiac orifice of the stomach of the sow. Being entirely unable to account for this phenomenon, he, without removing the pig, cut out a good portion of the fat which surrounded it, and brought the whole to me. I enquired into the history of the case, and was informed by Mr. M. that the sow was delivered of a litter about the last of August. That she was thrifty as usual. At the end of the period of lactation, she was fed with the intention of making pork of her. When she began to thrive, she again became pregnant. About a month after she became pregnant, she was killed for pork, and was in every respect healthy. The extra-uterine pig had never produced any appreciable inflammation nor disturbance of any kind, as the sow had been perfectly healthy during the whole period. I carefully removed the fat, which almost entirely covered the fetus, in the presence of my friend Francis E. Manson, M. D. and several other gentlemen; and what is most singular, is the fact, that there was nothing like either *placenta* or *funis*. I endeavored to ascertain whether it was surrounded by the usual membranes, but could not positively determine; but if it was, they were very thin and in immediate contact with the body, as I could separate nothing with the scalpel and forceps,



but very small flakes of a membraniform matter. There was nothing like liquor amnii present.

The organization of the pig is not entirely complete: the posterior extremities are not as well developed as the anterior. The tail is wanting. The eyes and ears, deficient. The head is larger than natural, and not exactly of the ordinary shape, being larger below the eyes than natural. Its teeth and hoofs are nearly natural.

The dimensions of the pig are as follows;

Length of the body and head,	4 1-8 inches
"    "    without the head,	2 5-8
From the first cervical vertebra to the os frontis,	1 3-8
Circumference of the body about the middle,	4 5-8
Circumference of the head above the eyes,	4 15-16

From the dimensions it will be seen, that the fœtus was nearly the full size of one at full period of gestation; and the organization, though not complete is not greatly deficient.

Physiologists, generally, agree that *Eccyesis Abdominalis*, or abdominal fœtation may occur in three different ways:

1st. The fallopian tubes may be impervious from fat, or the opening into them be so small, that the impregnated ovum cannot pass, or the fimbriæ may not clasp the impregnated ovum, at the moment it is detached, and in these cases the ovum falls into the cavity of the abdomen,

2nd. The impregnated ovum may be unable to escape from the ovarium, till its growth is sufficient to burst its envelopes, at which time the ovum falls into the cavity of the abdomen.

3d. The ovum may, after entering the fallopian tubes, be arrested in its passage to the uterus by fat, or the small diameter of the tubes; in which case its growth continues, and, in some instances, the parietes of the tube give way, and the embryo or fœtus is precipitated into the abdominal cavity. In each of the two latter varieties, fatal inflammation is apt to occur, from the combined operation of the inflammation, caused by the rent in the tube or ovarium, and that, caused by the pressure of so large a foreign body on the abdominal viscera. In the first variety, the ovum, being very small, the parts accommodate themselves to its intrusion, and its growth takes place without exciting in

inflammation. The latter is the mode by which the present case must have occurred.

The present case is interesting from its locality, as well as from the entire absence of every thing like *placenta*, *funis umbilicalis*, and *liquor amnii*.

How the ovum performed the journey from that portion of the abdomen, into which it must have fallen from the ovarium, to the cardiac orifice of the stomach, where it was located, is a question which I am unable to answer.

The source from which the ovum derives its nourishment has long divided physiologists. And notwithstanding the most able pens have been employed in the discussion, the subject is not yet completely settled. It is not my object to notice, in detail, all the facts and arguments which have been adduced on this interesting subject. The most prevalent doctrine, at the present time, is that which assigns the placenta as the source. Some, however, maintain that the fetus is nourished from the liquor amnii.

In speaking of the circumstances, proven, or rendered probable by extra-uterine fætation, Dr. Denman says that, "though the child be placed in one of the fallopian tubes, or in the cavity of the abdomen, a placenta is formed, different indeed in structure, but capable of supplying the child with sufficient nourishment to bring it to perfection." Though this is perhaps true in the main, it is certainly not always so, as is proven by the present case; and Dr. Good is more correct when, in speaking on the same subject he says "it, in *some instances* becomes surrounded with an imperfect kind of placenta, develops the general structure of its kind, &c." Though I admit the placenta to be the usual source through which the fetus derives its nutriment, I cannot admit that it is the only source; for there are many well authenticated cases on record, independent of the one I have just detailed, in which there was either no placenta, or no communication between it and the fœtus. Dr. Good quotes a case, from Hoffman, of a fœtus "born in full health and vigor, with the funis sphacelated and divided into two parts"—from Vander Wiel, one where "a living, healthy child, was exhibited without any umbilicus, as a public spectacle"—and from a foreign collection of literary curiosities, the case of a hare,



which was found on being opened, to contain three leverets, two of them without placenta, or umbilical vessels, and the other with both." And other cases are recorded by Ploucquet in his *Initia*. In the history of Dr. Good's case, which he witnessed in 1791, and published in 1795, he says, "The labour was natural, the child scarcely less than of the ordinary size, was born alive, cried feebly once or twice after birth, and died in about ten minutes. The organization, as well external as internal, was imperfect in many parts. There was no sexual character whatever, neither penis nor pudendum, nor any interior organ of generation: there was no anus or rectum, no *funis*, no *umbilicus*; the minutest investigation could not discover the least trace of any." And in a short time, the rudiment of a shriveled placenta followed, "without a *funis* or *umbilical* vessel of any kind, or any other appendage by which it appeared to have been attached to the child. No hæmorrhage, or even discolouration followed its removal from the uterus."\* In a short time, a healthy, living child was born, attached to its proper placenta.

From these facts, we are compelled to admit, that though the placenta be the organ through which the fœtus derives its nourishment from the mother usually, it is not indispensable to its existence; and that nature has other resources upon which she can draw, capable of sustaining the fœtus to the full period of utero-gestation.

It is well known, that the ovum exists, both before and after its arrival in the uterus, without a placenta; and if nature has supplied the means capable of supporting the ovum during part of its stay in utero, without a placenta, is it not rational to conclude, independently of facts, that she has furnished means capable of sustaining it during the whole of its stay? And facts fully sustain the inference: for independently of the cases already quoted, it is known to naturalists that the kangaroo, opossum and wombat, all breed their young without either placenta or funis. The embryos are not attached to the uterus, but are enveloped in one or more membranes, containing a gelatinous matter, from which they derive their nourishment, and apparently their air. What then are these resources? Mr. Gibson, in the *Edinburgh Medical Essays*, has endeavored to prove that the

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\*Good's Study of Medicine, vol. 4, page 21:

liquor amnii, and not the placenta, is the substance from which the fœtus is nourished. But I must differ with him for the following reasons :

1. The embryo, during the early period of its existence, does not appear to be surrounded by the liquor amnii ; but by a gelatinous matter, like those of the kangaroo, opossum and wombat.

2. The liquor amnii is always in an inverse ratio to the demands of the fetus : being relatively smallest when the fœtus is largest.

3. The liquor amnii is often found exceedingly impure ; sometimes acid, putrescent, feculent, bloody.—(CALDWELL.)

4. But the strongest objection is, that it is often deficient, and occasionally, *entirely wanting* ; constituting what are called, “dry births.”

But whilst I cannot admit the liquor amnii to be the ordinary source of nourishment, I am not prepared to deny that it ever is, but on the contrary, I believe that the fetus is capable of drawing nourishment, by cutaneous absorption, from that which surrounds it, when the placenta or funis is wanting.

In the case I have detailed, the nutriment must have been extracted from the fat of the mother, as this was the only substance with which it was in contact.

The whole of the facts then, taken together, I think justify the following conclusions :

1. That neither placenta, nor liquor amnii, is essential to the nourishment of the fetus.

2. That either may be the source, when the other is wanting.

3. That when the liquor amnii is the source of nourishment, the nutriment is conveyed by cutaneous absorption.

4. That in extra-uterine fœtation, there is sometimes neither placenta nor liquor amnii, and when both are wanting, the fetus is capable of extracting sufficient nutriment, by cutaneous absorption, from the surrounding parts with which it is in contact, to sustain it to the full period of utero-gestation,

## ARTICLE II.

*Verminous Irritation as simulating other diseases.* By WM. MARKLEY LEE, M. D., of Indiantown, S. C.

Intestinal worms are often improperly supposed to excite fever in the human subject; for every experienced physician can recall instances in which worms have been discharged, and in which the friends of the patient have in consequence ascribed the febrile symptoms to verminous irritation, whereas their discharge was rather a consequence, than a cause of fever.

I have often been astonished, however, that so few instances are recorded in medical periodicals, of worms as causing the symptoms of other diseases. They may, and I am convinced frequently do, irritate certain nerves, and produce symptoms which are never attributed to their influence. To demonstrate this position, I will describe certain cases which have occurred in my own practice, to all appearance totally disconnected with worms, but which were promptly cured by anthelmintics.

SCIATICA.—Soon after I commenced the exercise of my profession in Charleston, I was requested to attend a lad about nine years of age, laboring under symptoms of Sciatica:—Blistering and the remedies usually employed, were tried in vain for several days. At one of my visits, when at a loss what next to prescribe, his mother informed me that he ground his teeth frequently in his sleep; this led me to suspect verminous irritation; I therefore sent him anthelmintic-medicine, composed of calomel and spigelia, and at my next visit I was truly gratified to see him walking about the house, free from all pain, except the irritation of the blister. I was informed, that immediately after he had discharged a number of lumbrici, the rheumatic symptoms vanished. He was from that time restored to perfect health.

PHTHISIS PULMONALIS.—I was soon after requested to visit a young married woman, whose case was marked by symptoms of the above disease—cough so incessant as to prevent sleep, and was exhausting her strength; remedies usually exhibited in similar cases, here failed to afford relief, until one day she mentioned some symptom which led me to suspect verminous



irritation. After the exhibition of the anthelmintic already mentioned, in the space of 40 hours she discharged an equal number of lumbrici, and the symptoms of pulmonary disease were relieved promptly and permanently.

PARAPLEGIA.—I was called during the last summer to a young girl about 11 years of age, sick with bilious remittent fever; she had been bled and purged without material benefit; the febrile excitement was moderate, but in addition to considerable pain and soreness about the præcordia, there was a remarkable loss of power over the lower extremities, amounting even to a total inability to turn in bed without assistance. A careful examination of the spinal column presented no symptom of local inflammation. In reply to my interrogatories, I was assured that she had received no blow, or injury of the spine, but that the symptoms of paraplegia supervened at the same time with the fever. Her friends united in stating that she frequently ground her teeth during sleep. A blister to the epigastrium was directed; and as I had never seen nor read of a similar case from verminous irritation, my treatment was adapted both to fever and worms.

R. Nit. Potass. ʒi.

Cal.

Ipecac. &

Camphor āā. ʒss. m.

of this compound, a frequent prescription of mine in billious remittent, I directed 8 grs. every 3 hours during the paroxysm, and that ʒss. calomel be combined with the first dose. I was in hopes, from the well established efficacy of this preparation of mercury, and the success which is reported to attend the exhibition of camphor in Italian practice, that if this form of Paraplegia was caused by worms, relief would be promptly obtained. A dose of ol. ricini and sp. terebinthinæ was also directed to be administered the succeeding morning. At my next visit, I ascertained that she had discharged a large number of worms, and was enabled to walk about: she soon recovered.

Such facts I consider interesting and important, and have been astonished that they have excited so little attention from the profession. Have I erred in attributing these cases to verminous irritation? In the two former, the treatment usually insti-

tuted, had failed to produce the results expected, and it was not until worms had been evacuated, that relief was obtained.

I trust this hasty article may elicit the experience of my medical brethren on this point.

In conclusion, I will describe a case which came under my care while assistant physician of the (Charleston) Dispensary, in 1828—I was called to an elderly woman who for several years had been troubled with *Tænia*; several eminent physicians, in succession, had dislodged a portion of the worm; but in the course of a few months, medical aid was again required—for as the head of the *Tænia* had not been discharged, new joints had been regenerated and morbid symptom renewed—the exhibition of calomel and gamboge, followed by *ol. ricini* and *sp. terebinth.* in a few hours caused the discharge of a *tænia* about 4 feet in length. Attributing the recurrence of the disease to an atony of the alimentary canal, after the exhibition of alkalis for the purpose of removing the tenacious mucus from the mouths of the absorbents, I prescribed the solution of acet. of iron, formed by digesting the carbonate of iron in strong vinegar, to be taken in doses of a tea-spoon full thrice a day. But a short time was necessary to demonstrate its efficacy, for her health improved rapidly. By my directions, she persisted in the use of the remedy for several weeks. After all former attacks, a year had never elapsed without a renewal of the symptoms. Fully three years after, I again saw her, when she stated that she had never since perceived any symptoms of the worm.

A few months since, I attended a young negro, from whom, in the space of a week, I succeeded in dislodging more than 70 *lumbrici*. The same tonic (acet. iron) was prescribed for him—and at the present time, his master has not a more healthy young negro.

These latter cases, although not strictly connected with the above article, are adduced to show the expediency and necessity of following up the exhibition of anthelmintics by chalybeates, or other tonics.

## ARTICLE III.

*Account of an Anencephalus, or Human Monstrosity without a brain and spinal marrow. By ALEXANDER Y. NICOLL, M. D. and RICHARD D. ARNOLD, M. D. of Savannah. Read before the Medical Society of Georgia, on the 6th May, 1837.*

On the 12th February, 1837, we were requested to examine a female negro child, which had the night previous been prematurely born at the eighth month, to give our opinions whether violence had been used or not, which in consequence of the singular appearance it presented, was supposed by those who attended at the delivery. Upon a superficial examination, we pronounced that no violence had been used to destroy the child, but that it was a monster of an interesting character, and requested that it might be given to us for a more minute examination, which was readily granted. We have, with the assistance of Dr. LEWIS F. NICOLL, of New York, made as careful an examination of this case, as our means and experience would allow us, and believe it is important in determining the question of the evolution of the brain and nervous system;—not so much, however, from the deductions which we ourselves have drawn from the dissection, as from its affording additional facts to those which have already been presented to the profession on this subject, by older and abler heads than ours.

A front view of the child exhibited to us the eyelids as two round bodies placed upon the top of the head, as delineated in fig. 1st, which previous to the dissection, we considered as deformities in themselves. In this view, the chin was resting upon the chest, bringing the head so low down, that the ears not only touched, but were actually turned up by the shoulders. Upon looking at the head laterally, it appeared as if cut off by a plane which intersected it just above the nose; thence passing down to the top of the ears and there exhibiting a slight prominence, as is shown in fig. 2d, occasioned by the sponginess of the membrane, hereafter to be mentioned, the plane then passing down at a greater angle to the shoulder.

Looking at the head posteriorly, it appeared as if the whole



scalp had been removed, with the exception of a small portion just back of the eyes, which passed down on each side close to the ears, and terminated directly upon the shoulders; upon the whole of which hair had been formed. The central portion, instead of the convexity usually observed, presented a very irregular appearance, dark and bloody, as if violence had been used.— This central portion was covered by a thin membrane, which we believed to be the Dura Mater. Upon pressing this with the finger, it appeared to be in direct contact with the bones beneath with the exception of a small part in the centre, which felt spongy to the touch, but at the same time of very little thickness.

Proceeding to the dissection and removing the scalp behind the eyes, we were surprised to find not the least rudiment of the frontal bone, except a portion of the orbital plates which was attached to a confused mass of bone, hereafter to be mentioned.— Upon dissecting the membrane from the central portion, we found it closely adherent to the basis of the cranium, if we may call it so, (with the exception of the spongy central portion that appeared to contain blood,) and traced it down to the spinal canal from which it appeared to emanate. Underneath this membrane was a confused mass of bone, very solid, without any marks of the usual divisions of the bones of the cranium. Continuing on, we found no trace of the parietal, the occipital, or the squamous portion of the temporal bone. After an attentive examination, we could not discover the least portion of the cerebrum or cerebellum. That portion of the *forameu magnum*, which is formed by the sphenoid bone, and which is usually, more or less, round, was in this case angular, the angle being formed by the junction of the bases of two triangular plane faces, the vertices of which terminated behind the ears, and there formed something like the mastoid process; which, however, instead of being round, presented a sharp edge looking outwards and backwards, as seen in fig. 3d. Believing that something might be contained in the confused mass of bone which formed what might be considered the base of the skull, we sawed through it, but found it perfectly solid. In examining the cervical portion of the vertebral column, we could not discover the atlas; and found that it was composed of four, instead of seven, vertebræ. On opening the spinal column, there was no trace of the spinal marrow; but

the membranes were present from about the 2d dorsal vertebra. From the position and great prominence of the eyes, we doubted if there could be any antrum maxillare; which, upon dissection, we found to be the case. The eye had made itself a socket in that portion of the upper maxilla commonly occupied by the antrum. In our dissection, we were particularly struck with the quantity of a dense matter we met with, as also the abundance of hair, which, in this particular case, covered the cheeks, the shoulders, the outside of the arms and fore-arms, the back down to the nates, and the outside of the thighs and legs.

We next dissected down, to ascertain the appearance of the axillary and popliteal nerves, and found them large and well developed. We also dissected the neck, to ascertain the comparative size of the internal and external carotid; but regret that we were unable to determine this, in consequence of our wanting the means of injecting them; and the common carotid was so small, and not being injected, we lost all trace of the artery in a mass of caseous matter, behind the angle of the lower maxilla. With the exception of the head and neck, every other part of the child, externally, was remarkably well formed and plump.

From the foregoing description, it will be at once perceived, that the monstrosity described answers exactly to that known as an ANENCEPHALUS; as that term has been reserved to designate such as have the brain partially or completely absent, "with a corresponding defect of the parts by which it is protected." In this case the external organs of the senses were present.

Our object in bringing this subject before the Society, is not merely that a "*lusus naturæ*" might be brought to the cognizance of our medical brethren, and not be buried in obscurity—But in contemplating it, it cannot fail to strike every observer as being pregnant with interest, in a philosophical point of view. In the few observations which follow, it is more our object to elicit research than to provoke criticism. In the article ANENCEPHALUS, in that excellent work "the Cyclopædia of Practical Medicine and Surgery," Dr. GEDDINGS, of Baltimore, has the following observations:

"In that variety of anencephalous monsters in which the defect is most considerable, there is a total absence of both brain and spinal marrow: the peripheral portion of the nervous system ex-

ists and is well formed ; but the nervous centre, or cerebro-spinal axis, is altogether defective. *This is by far the rarest form of this species of abnormal deviation, and is the only one to which the term anencephalus can be properly applied. So seldom indeed does it occur, that only a few cases are to be found on record.*"

In this, as in the case reported by MORGAGNI, and cited in that article, the *cerebrum cerebellum* and *medulla spinalis* were absent ; and like that reported by VANHORNE, "the deformed bones of the cranium were so thick and closely grouped together, that no cavity existed ; but the membranes of the *medulla spinalis* were developed.

The membrane lying over the bones of the cranium was undoubtedly Dura Mater ; because, after lifting it up, the periosteum was found adhering to the bones, and moreover the membrane was continuous from the cavity of the spine. In relation to the peripheral nerves, there are some facts worthy of attentive consideration. All the nerves of the periphery were not present.—To obviate misapprehension, we beg leave to state, that in nerves of the periphery, we include those which establish a communication between the brain and spinal marrow and the organs of the external senses.

1st. *Of the Nerves to the orbit of the Eye.*—In the normal state, no single organ is so well provided with nerves as this.—Anatomists reckon no less than six, viz:—the optic ; the 4th pair, or pathetic, (the respiratory of Bell) ; a branch of the 5th, or Trigemini ; the 3d, or general motor of the eye ; the 6th, or external motor ; and a branch of the sympathetic which joins it on entering the orbit. It will be recollected, that the ball of the eye rested on the upper maxilla, and had formed a fossa for itself in that part usually occupied by the antrum maxillare. A careful and minute examination failed to reveal to us a single nervous filament about the ball of the eye, or in its vicinity. The foramen by which the optic nerve passes through the sclerotic, did not exist ; and although every other part of the eye was satisfactorily apparent, the *Retina* (if it had existence) could not be perceived by us. The six muscles of the eye-ball were also deficient.

2d. *The Nerves to the Nares.*—In the normal state, the Nares are supplied from two sources, the olfactory and the trigeminus. There was no trace of a single filament of either.



3d. *Of the Ear.*—There was no cavity in the mass of bone which might be said to represent the petrous portion of the temporal bone. Of course all the auditory apparatus usually contained in it, must have been wanting. The external ear was present, and a small depression represented the *meatus auditorius externus*. As might be inferred from there being no cavity in which to pursue its usual course through the petrous bone, the Facial nerve was entirely wanting. Indeed, the space behind the angle of the inferior maxillary bone, was filled with a kind of caseous matter, in which no muscular fibres nor nervous filaments could be found—Not the least interesting thing in this dissection, was the anatomy of the nerves going to the tongue and down the front of the neck. As all the nerves of the encephalon which we had looked for, and which should have come through foramina in the cranium, had proved deficient; it was with no little curiosity that we commenced a careful examination of that part. The pneumo-gastric, the hypo-glossal, and the glosso-pharyngeal, equally with the portio-dura, trigeminus, patheticus, and motor-oculi, are in the normal state, involved in foramina in the cranium; and analogy would have led us to infer their absence. But, although from the shortness and imperfection of the neck, and the small developement of the muscles in its front, a little more than ordinary care was required in the dissection, the pneumo-gastric, the hypo-glossal, with its descending Ramus, and the glosso-pharyngeal, were distinctly visible. The preparation now before the Society will make it apparent to every one. But they were lost above in the caseous matter which we mentioned as existing behind the angle of the inferior maxilla. The common carotid and the internal jugular were also apparent, though small, and they were insensibly lost in the same matter.

As all the other parts of the body, save the head, were well formed, it remained to be seen what was the condition of the nerves distributed in them. It was not deemed necessary to examine more than one for each extremity. For the arm, the median nerve was cut down to and exposed. It was of a full and natural size. The popliteal nerve was exposed in the same manner and with a similar result.

What the nature of the energy of the nerves is, will probably always remain a matter of speculation. We can appreciate the

powers of life only by their effects. But let not uncertainty be hence attributed to our profession, above others. Who has ever approximated to the real nature of that wonderful law by which the planets are made to revolve in their respective orbits, and the harmony of worlds preserved? Yet, from a careful examination of its effects, laws have been deduced and made the basis of unerring calculations—So the diligent observer of nature at the bedside and in the dissecting room, cannot fail to arrive at a knowledge of the laws of life that will be of inestimable value to him in the investigation of disease, which is a departure from their natural course.

In this case, there could be no dispute as to the priority of developement, between the brain and spinal marrow. Is it not then improper to speak of one taking its origin from the other; and is not this case a confirmation of HALLER's opinion that there is an evolution of the parts of the fœtus without the *addition* of any new part?

With the exception of the head, all the parts were well nourished. Certainly they did not depend on nervous energy derived from the cerebro-spinal axis, for their nutrition. We must then look to the arteries as the source of nutrition, and as the cause of the developement of such nerves as did exist. It is evident that the arteries which exist in the normal state, could not exist in the confused mass of bone constituting the cranium in this instance; hence a deficiency in evolution of the nervous, muscular and bony matter of that part.

The nerves that were developed must have had an energy independent of the brain and spinal marrow.

The result of the researches of TIEDEMAN on the developement of the brain in the fœtus, is that the spinal marrow is the part of the nervous system first formed, and most distinct in its early months. The case before us, proves that the deficiency of the spinal marrow did not prevent the formation of most of the peripheral portion of that system; and that such formation is not dependent in any way upon that of the Spinal Marrow.

A few observations on monsters will close what we have to say on the subject. Like the majority of monsters on record, this was of the female sex. The observations of MECKEL have proved the "genital organs of the two sexes are formed primitive-

ly in the same model, and that they should be considered only as a modification of the same fundamental type;" and that the embryo is, *in all cases, primarily of the female sex*. The imperfect formation thus occurring more frequently in females, has been supposed by GEORGET to be owing to a feebler energy of the formative or organic powers in the female than in the male! Why a deficiency should exist in one part in preference to another, must remain a matter of speculation.

The history of the mother affords no clue in this case. She is a woman about 30 years of age, well formed, and has been the mother of eight children, all of whom, with the exception of two, have been delivered at the regular time; and her deliveries have generally been easy, and her recovery rapid. There had been nothing peculiar during this pregnancy. In the delivery, there was nothing to lead to a suspicion of any thing unusual, and it was not until the child was fairly exposed to the light, that it was discovered to be a monster. There was said to be a larger quantity than usual of the liquor amnii; but this we are inclined to attribute to the birth being premature. The child showed no sign of life after birth. It had moved, sensibly, when in utero.

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#### ARTICLE IV.

*Case of Intussusception: by Dr. JUDSON; communicated by  
Dr. BACON, of St. Mary's, Geo.*

R. H. H., a fine, healthy boy, 3 months old, was attacked about 10 o'clock on the evening of the 16th of June, with a slight colic. The symptoms were so mild as to excite no alarm. A little paregoric was given by the mother, and it slept as quietly as usual all night. Next morning at 6 o'clock, violent symptoms appeared—severe vomiting, pain in the abdomen, and paroxysms



of extreme distress. He had one natural stool after the first vomiting occurred. The mother soon became alarmed and administered some magnesia, which was instantly thrown up.—Some castor oil was then exhibited, but no relief was obtained; and, except the small stool above-mentioned, nothing had passed from the bowels but a few drops of pure blood—This took place several times, and always with great pain and straining. Dr. BACON was now called in. The child had become alarmingly ill, and was vomiting matter of a stercoraceous colour and smell.—The case was at once recognised as Ileus of an aggravated character. But as the child had been seized in perfect health without exposure to any violence, or to any known error of diet or regimen, the cause was involved in great obscurity. The ordinary remedies for Ileus were employed, but did not in the least check the fearful progress of the malady. The symptoms continued to increase in violence without other material change, till 6 o'clock in the evening, when (12 hours from the onset of the complaint,) the child died. There was at no time much apparent tenderness in the abdomen and the tumour, so often noticed in cases of intussusception, was not observed at all. During the last three or four hours, the bowels became tympanitic and no tumour of the kind could have been discovered, even had it existed.

*Post Mortem Examination.*—The body was examined 18 hours after death, by Dr. BACON, in the presence of Drs. CHURCH and JUDSON. It was not in the least degree offensive, as putrefaction had not begun, except perhaps in the scrotum and groin, where a slight discolouration appeared. On laying open the abdomen, all the viscera except the intestines were found perfectly healthy. The stomach and intestines were greatly distended with flatus, but devoid of all faecal matter. From a point a little above the sigmoid flexure of the colon, a portion of the bowel six inches in length was found distended one-third beyond its natural size, discoloured almost to blackness, nearly gangrenous and filled or rather bloated up with some soft substance.—The intestines upwards from this point through the whole course of the ileum and part of the jejunum, were intensely injected and inflamed, the extreme redness and vascularity gradually diminishing with the distance from the immediate seat of disease.

Indeed it was agreed by all present, that they had never seen so perfect and beautiful an injection as the intestinal coats exhibited.

On removing the parts for a closer examination, a large portion of the ileum, the whole of the cæcum, the ascending colon and its arch were found invaginated in the descending colon, and the whole so much displaced that the ileum seemed to be nearly continuous with the sigmoid flexure of the colon. Considerable effort was required to draw out the invaginated parts. They had completely blocked up the whole intestinal cavity for the distance of three or four inches. Yet no adhesion had formed—no coagulable lymph was thrown out—nor were any of the ordinary products of inflammation seen, unless the blackness observable at the point of intussusception be considered as proof of gangrene. The inflammation produced by the unnatural situation of the bowels seems to have destroyed the child in its very first stage. The extreme pain accompanying such displacement and such violent inflammation, may have accelerated the fatal issue. It was made evident in the examination, that had the abdomen been laid open during life (as has been sometimes proposed) with a view to disengage the invaginated parts, they could not have been reduced without a degree of force amounting almost to violence. I have seen no case on record that run so rapid a course.

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#### ARTICLE V.

*Letter from Dr. E. H. MACON, on the diuretic virtues of the Azalea, or Honeysuckle.*

MERCER INSTITUTE, April 5, 1837.

*Mr. Editor*—It has been for some time my intention to make known to you, and through your valuable journal, to the profession at large, a new article which has proved in my hands a

most valuable therapeutic agent. I am not aware that it has ever been introduced into regular practice; and that its virtues may be more fully tested by experiment, I wish to call the attention of the faculty of the College of my native state to the article in question.

*Azalea—Honeysuckle—the Root.*—This shrub grows abundantly on the banks of small rivulets. Its flowers are red, and sometimes very pale. It yields a semi-transparent fruit\* from the size of a quarter dollar to that of the palm of the hand. Children frequently pluck and eat it. It is a vegetable diuretic.

About four years ago, I heard a countryman urging the claims of a strong decoction of Honeysuckle to powerful diuretic properties, and I determined on testing its virtues at the first opportunity. It was not long before an extremely distressing case of hydrothorax was placed under my care. The patient could not lie down, but was compelled to sleep in a sitting posture. He could scarcely walk; the feet, legs and thighs, as well as abdomen and face, being enormously swollen by anasarcaous effusion.

In addition to various remedies as advised by different authors, I ordered a strong decoction of the root of Honeysuckle to be drunk at all times, and in any quantity, instead of water.† Within ten days all the hydropic enlargements were entirely removed. So rapid had been the abduction of the effused fluid that the skin on the limbs presented a shrivelled and wrinkled appearance.—The patient, a robust negro man, was, in two weeks from the time the treatment was commenced, enabled to go to his ordinary labor; and within four weeks was discharged as perfectly well.

I have since treated a number of dropsical cases, in only one of which have I failed to reduce the swelling forthwith. Some of the cases were treated three years ago, and continue well.

I would not have it understood that I have not used other medicines during the treatment of these cases. My success in the first, made me unwilling to abandon the plan of treatment then

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\*We should consider this an *excrecence*, instead of a fruit. It is not found on the fruit buds, but attached to the leaves, and other parts of the shrub.—*Ed.*

†The administration of the new remedy, *in addition* to the prescriptions recommended by authors, leaves the truth unrevealed, whether the new or the old remedies wrought the good in the case. There should be great precision in determining the value of new remedies.—*Id.*



adopted, and to which I have since, uniformly adhered, with only a few trifling exceptions.

According to my pathological views of dropsy formerly and at present, thus, as there is no lesion, injury or mechanical impediment to the proper performance of the peculiar function of the absorbent system, dropsy must be owing to a want of energy, or a state of atony or torpor in that system. With these views I prescribed, after the exhibition of a brisk hydragogue cathartic, the calomel and squill pill, and a strong decoction of honeysuckle root. It is not my purpose to dilate on calomel as having the virtue to stimulate and increase the power of the absorbent system when sluggish, nor to discuss the question of the specific influence of squills on the pulmonary system, nor that of its diuretic properties. My chief reliance however for a diuretic, is the honeysuckle. I use such other remedies as the indications of cure may seem to demand, but of all articles with which I am acquainted, I repeat that the root of the honeysuckle is, for diuretic purposes, the most efficient.

As I am not writing an essay on dropsy, I will proceed to notice its successful administration in some other diseases.

In *retention of urine* from other causes than mechanical obstruction and paralysis of the bladder, I have used it with great benefit; so that in my limited practice, I have never had occasion to use the catheter but in one case, and that was one of retention of urine from paralysis of the bladder.

In all cases of strangury and gravel, and of inability to discharge urine in gonorrhœa, gleet, &c., I uniformly prescribe the Honeysuckle—not, however, depending on this for the cure of the disease which may cause or accompany this retention, but simply for diuresis. In short, in whatever case a diuretic is indicated, the honeysuckle may be used freely and with safety. It has always proved perfectly controlable, its effects ceasing when its use was discontinued.

The case of dropsy referred to in the former part of this letter, wherein I failed to reduce the swelling, was that of a negro woman who had been afflicted with ascites for three years, during most of which time she had been under the treatment of experienced physicians. Her abdomen was enormously distended. After using various remedies which seemed to be indicated

in this case, at length, during an interval of phylism, produced by the use of the calomel and squill pills, I ordered her to make a constant and free drink of the Honeysuckle, excluding all other drinks and medicines for several days. I did not see her again for a week, at which time she informed me that when sitting down, she was afraid to get up if in company, because the water would run from her on every attempt to walk; expressing at the same time great astonishment, that the quantity of fluid voided far exceeded that taken in. She was at one time reduced in size about two-thirds, and seemed for a time to promise continued amendment; but after a time the swelling again increased, alike in defiance of this and all other remedies. In all the cases with the exception of this, and one of hydrothorax attended with hypertrophy of the heart, I succeeded in effecting permanent cures, so far as has yet appeared, or in procuring such amendment as to cause the patient to abandon the remedy too early, from the belief of no farther existing necessity.

I might say much more on this subject, but consider that I have said enough to introduce the article in question to the attention of the profession. Will you and your colleagues adopt the use of the Honeysuckle, and give the results in the *SOUTHERN MEDICAL AND SURGICAL JOURNAL*?

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Dr. MACON requests information on the following cases:

1st. A clergyman of Oglethorpe, whilst leading his horse by the fore-top, was by a sudden effort of the horse, caused to suffer great pain at the insertion of the deltoid muscle. He has almost entirely lost the use of the limb, being unable to raise it higher than his breast, or move it in any other direction except forward. The limb has been examined by several physicians, none of whom can detect luxation or fracture. All ordinary topical applications have been made in vain.

2d. Mrs. L\*\*\*\*, in this vicinity, whilst stretching out a hank of cotton yarn, suddenly felt pain about the middle of the humerus. In a few weeks, the biceps flexor cubiti became much contracted and still remains so, bending the fore-arm up to the breast. The limb is painful and almost useless. No dislocation or fracture can be detected.

3d. In October, a negro girl was struck by the falling of a tree in such a manner that her scalp was considerably lacerated and her left shoulder bruised and violently strained. No fracture of clavicle, scapula or humerus, nor dislocation, could be detected, after the most careful examination. All topical applications from the use of which benefit might be hoped for, were used to no good effect. Six weeks after, the arm was entirely useless, but moved in any direction without the least pain. The motion of the shoulder joint was free and without crepitus. The paralyzed state of the parts about the joint afforded a free examination of the head of the humerus, which was always in place with the glenoid cavity. The force which injured the shoulder was applied from above.

It is hoped that a clear and rational pathology of these cases will be given by some of the readers of the JOURNAL.

For the assistance of those who may be disposed to adopt the use of Dr. MACON'S diuretic, we append the following extract of a letter from a scientific friend, on the subject of the Azalea :

"The Azalea (or 'Bush Honeysuckle,' as contradistinctive to the genera *Caprifolium* and *Lenicera*, which are called Woodbines, from woodbind, and are twining or trailing plants) is arranged in the Linnæan class and order Pentandria monogynia, and the natural order Rhoderaceæ. There are ten species described in the 7th edition of *Eaton's Manual of Botany*, and full as many more set down as varieties or sub-species ;—the growth of the United States. Elliott has five indigenous to South Carolina and Georgia, with three times that number of varieties, but he quotes *Donn's Hortus Kewensis* for his subdivisions, instead of resorting to the forests. If we pass to Europe and embrace their garden varieties, which are the only true varieties, we find in the collection of Messrs. C. LONNIGES & SONS, near London, twenty three species, one hundred and eighty-six varieties and twenty-four sub-varieties ; seven-tenths of which are derived from North American species.

"The *Azalea nudiflora* and *Azalea viscosa* are the most abundant and widest spread over the United States ; beginning at the borders of Canada and extending along the broken land, and particularly the mountain range, to their most Southern extremity ; they often approach the sea board, but become more plentiful as you recede to the midland."



As Dr. MACON has distinguished no particular species or variety, we presume he alludes to any or all the varieties of these species. It would be well however, for those who adopt its use, to observe the effects of the different species at least; the difference of which will, we presume, be found, if at all, only in the *degree*, and not in the *kind* of power.—*Ed.*

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#### ARTICLE VI.

*An Essay on Female Diseases, and the Use of the Pessary in Uterine Displacements. By Dr. S. M. MEEK, of Tuscaloosa, Ala.*

THE present is an age of considerable speculation and enterprise, in science and scientific pursuits generally; and no department affords a more extensive and interesting field for investigation than that of medicine; nor can any be found with which the life and happiness of man (in his present state) is so closely connected: consequently there is no subject more worthy of deep thought and thorough investigation, by the philanthropist and scholar. This, however, becomes the peculiar duty of the medical profession.

The interest taken by medical men, both in Europe and in our own country, indicates that they do not design the subject to slumber, as the increase in the number of medical journals and reviews, both in Europe and America; and the general and scientific character of most of those periodicals omen well an improvement in the healing art.

In the United States, the North and West are in advance on this deeply interesting subject, nor have the Southern states kept pace with their northern and western sisters, in proportion to

the talent, wealth and medical science of which they could boast.

Our zeal in the good cause has recently aroused us from our lethargy, and even as far south as the city of Augusta, in the state of Georgia, we have a Medical Journal published, which in point of interesting subjects and scientific and practical research, (though but young) will not suffer by comparison with many of those of more mature years.

Although on the healthy condition of the uterus, the health, happiness and stability of mankind almost entirely depend, still there is, in my humble opinion, no department of medical science more generally neglected or noticed with less concern, than female complaints, and especially uterine affections.

It is true we have some works of considerable merit on this subject, both by ancient and modern writers; yet I must insist that the profession have not afforded their successors that light on this subject which they could have done and which its importance demands.

I am happy, however to find that our southern physicians, through the medium of our journals, have at length manifested a consciousness of the thrilling interest which should be felt on this subject; as it must be obvious to every close observer, that a southern climate and the constitution of females born and raised in the south, render them peculiarly subject to diseases of this organ, and should impose on the medical profession the duty of attempting to afford them that relief which is not to be looked for from any other source.

I am perfectly aware that in relation to this as well as to most subjects occupying the attention of medical men, there will always be a diversity of opinion, not only in relation to the remote and proximate cause of disease, but likewise as to the most proper remedial agents and their *modus operandi*.

I would therefore beg leave to notice a few of the causes which in my opinion, contribute to render the number and extent of female diseases much greater in southern than in northern latitudes—and

1st. The precocity resulting from climates, by which females arrive at puberty from two to six years earlier than in northern latitudes.

2d. The effect of the climate on the system producing greater

relaxation of the muscular fibre, and the parietes of the uterine and genital organs in general.

3d. The effects of early parturition on the uterus and its ligaments and on the vagina, and the imprudent exertions made by ignorant female accoucheurs to hasten the termination of labour.

4th. The delicacy felt by young, inexperienced females, in making known their condition with flour albus, prolapsus or procidentia uteri, producing delay in making application to the physician for the necessary assistance.

These, together with other causes, contribute largely to augment the sufferings of females in southern latitudes beyond what they suffer in colder climates.

The question then arises, what can be done to relieve female suffering and ameliorate their condition?

In the first vol. of the SOUTHERN MEDICAL AND SURGICAL JOURNAL, being No. xi. for April, 1837, I perceive the use of the Pessary in displacements of the uterus and vagina is brought up, and to some extent examined; but the conclusion to which the author of the essay arrives from his own experience, and the authorities to which he refers, on the first blush, was to my mind perfectly astounding, and led me to enquire, can it be so? At this day, illumined as we certainly are (or should be) by the sun of medical science—shall we be led to abandon to immediate sufferings, and finally to death, a vast number of the most invaluable human beings on the face of our globe, by taking from them (shall I say) the sheet anchor of their hope, that, on which hundreds have rested and found (or believed they found) themselves delivered from some of the most distressing diseases incidental to human nature, and that without proposing any adequate substitute, on which to fix their hopes when laboring under such peculiar affliction? When we recur to the medical history of gone-by ages, and enquire whether females then suffered as they do now, and whether these diseases were then known, and if so, how treated?—We are informed that as early as the days of Hippocrates, Pessaries were in use, and almost every author who has written on the *diseases* of females and on *midwifery*, from the days of the father of medicine, down to the present day, not only speaks of their successful application in practice, but considers them indispensable in many cases, as all other means resort-



ed to have failed, while Pessaries have proved successful. And Dr. DEWEES speaks of their use and utility, in language and under circumstances which cannot be mistaken or doubted even by the most skeptical.

I am authorised to say that most of the practising physicians in this city and vicinage, use the Pessary in their practice, and some of them believe that cases occur of both prolapsus and procidentia uteri, in which neither a recumbent position, nor Hull's utero abdominal supporter, nor any known remedy, will supersede the use of the Pessary.

For the last twenty-eight years I have been engaged in the practice of medicine, in South Carolina, Georgia, and for the last nineteen years in the state of Alabama, in or near the city of Tuscaloosa; during most of which time my attention has been called to the treatment of female diseases, and especially uterine affections.

While studying medicine, I formed a predilection for the sponge Pessary, not doubting, however, but that I should meet with cases which would in all probability require Pessaries of greater firmness; and subsequent practice has produced no change of opinion in relation to the use of the sponge. In the course of my practice, I must have prescribed and used the Pessary in more than two hundred cases, and I can confidently assert, that at least one hundred and fifty have derived evident benefit from their use; and in more than fifty cases they have been restored to a healthy condition, and (suffer me to add) a large majority of the cases have been prolapsus, not procidentia. And here I would offer a few reasons why I have been induced to prefer the sponge Pessary.

1st. The sponge Pessary is softer and more yielding, so as to accommodate itself to the parts without injury to the vagina, or uterus, and on this account may be used when the parts are somewhat inflamed and irritable.

2d. The sponge Pessary can be introduced and removed with less difficulty than any other kind, and that by the patient herself.

3d. The sponge Pessary does not obstruct the ordinary excretions, but absorbs them; and unless they should be reduntant, will imbibe the whole discharge when removed twice a day, as I always direct.

4th. The sponge Pessary is the best vehicle by which astringent and refrigerant applications can be made to the relaxed and inflamed parts ; at the same time injections may be used when the Pessary is removed : but this I have seldom found necessary when the sponge Pessary is well managed.

5. The sponge Pessary is more easily suited in size and form to all cases than any other kind of Pessary.

In many cases of displaced uterus, a recumbent position is indispensable to enable the parts affected to recover their natural position and tone, and in some cases this alone, or accompanied with suitable injections, may be all that is required ; while there are others (and especially when they have become chronic,) which would never be restored by position, injections or other means without the pessary. In such cases, when the Pessary is introduced, the patient, with but little inconvenience, can go on foot and attend to her ordinary business—and the parts thus kept in situ, the ligaments gradually recover their tone, the Pessary may then be dispensed with. I have had a number of cases of this description.

I am on this subject, as I would be on all others of importance, disposed to examine all the different bearings before I would attempt to controvert the views and opinions of others.

This, however, is a subject which has long occupied my strict, and I may add, my (almost) undivided, attention ; and although “doctors” may “disagree,” yet this disagreement should not obstruct, but accelerate the progress of medical science ; and Dr. J. A. EVE, in his remarks on professional qualifications and character, very justly observes, (in substance,) that the medical profession has fewer helps or way marks to assist and direct their course, than have those persons engaged in any other profession, and consequently they require stronger mental powers and more extensive scientific and literary acquirements.

Much has been effected by a close attention to mechanical principles within a few years past, in the application of steam power, together with suitable machinery to facilitate the intercourse between distant regions, and much animal labor has been dispensed with, and incalculable advantages in mechanics, agriculture and commerce, have been the result. Shall men use such physical and mental exertions to accomplish that which may add

to our comfort as well as pecuniary advancement, but accomplish nothing more ; while the medical profession, in whose hands are placed the health, life and happiness of thousands, rest satisfied with the attainments already made in the "healing art ;" although there has been so little accomplished for the relief of suffering humanity for ages past. We have but recently discovered that our predecessors in medicine were in error in some important parts of their practice, while we ourselves are unable to furnish a desideratum in its place.

Should not every physician feel it a duty incumbent on him to make some discovery or improvement in medicine, and never dispense with former discoveries without the best reason for so doing, and then only after proposing at least something which promises more certain and permanent relief?

I presume no one would assert that in all cases of uterine and vaginal displacements, a Pessary should be used, and that without reference to the condition of the parts as to metritis and other affections ; nor would any judicious practitioner prescribe or introduce a Pessary without first ascertaining as nearly as practicable the condition of the parts, and then determining as to the time for application, the size and nature of the Pessary to be used ; and even then he should not resolve to continue its use at all hazards, but be governed by the effects produced and either remove or continue the Pessary for the time being as circumstances may direct.

In several cases of prolapsus uteri which have come under my care (one of which has been within a month past) I have directed the use of the Pessary, believing at the same time the patient prepared for its use. But when on trial, it produced great uneasiness, I have then had it removed for some days and directed its use again when the irritable state of the parts shall have subsided ; and my hopes and expectations have been fully realized.

I am not at all surprised that many physicians have imbibed prejudice against the use of the Pessaries, who acknowledge they have never used them in practice, but have removed them when, after having been introduced by others, they were doing great injury to the parts. 'This is nothing more nor less than I should expect, from the solid unyielding nature of many Pessaries now in use, and highly recommended by some of our best physicians,



and from the length of time they direct them to remain without being removed.

But I presume none will make the foregoing assertion in relation to the sponge Pessary, when prepared of good fine sponge, of proper size, well introduced and removed twice a day.

When I commenced this essay, my design was to present my views on the Pessary and its use in displacements of the uterus, &c. in a concise and condensed form; but professional and other business so frequently interrupted my progress, that to give some general idea of my opinions I have necessarily been more prolix than I anticipated.

In conclusion, I would observe that several of the reasons offered by the essayist at the close of his essay, why "Pessaries ought now to be abandoned," would never have occurred to my mind, nor can they (in my opinion) have any weight, when the sponge Pessary is used as I direct. The patient herself can introduce and remove the Pessary, nor is it indispensable that it should remain when in bed; as the recumbent posture will be sufficient to keep the parts in site; but introduced before or when she rises. The use of the Pessary may be suspended (as I always order it to be) during the catamenial discharge; at which time the patient should avoid great bodily exertion and keep as much as convenient in a recumbent posture, nor should I apprehend any demoralizing influence from the use of the Pessary.

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NOTE.—Dr. MEEK seems to have, in common with some of the most respectable authors, used the terms *prolapsus* and *procidencia* somewhat differently from their general acceptation at the present day. It is true, that the application of the terms either way is arbitrary; and consequently Dr. M. as well as those from whom he adopted his nomenclature, had a perfect right to apply them as he might please. Still a fixed nomenclature for these cases is not of trivial importance; as the want of it has tended to unsettle the minds of pupils, and cause disagreements and misunderstandings amongst practitioners. Some authors have spun out the nomenclature for this displacement to express several different degrees thereof: as PARR, who by *relaxatio*, means a descent of the womb down to the middle of the vagina. By *proci-*

dentia, he characterises its descent to the labia; and by prolapsus, its falling through the labia pudendi. CHARLES MANSFIELD CLARKE says procidentia uteri has also been called prolapsus uteri and descensus uteri; the latter term being used to express the minor degree of the disease—the former, that in which the uterus has fallen out of the body, through the external parts. Dr. GOOD seems to use the terms procidentia and prolapsus uteri as synonymous with protrusion of the uterus into the vagina, and falling down of the womb. It is one of the species of his germs, “genital prolapse, and includes three varieties, the first of which he calls simplex. He then gives different degrees of this variety, thus:—“If the descent be only to the middle of the vagina, it is called *relaxatio*,” as by PARR; if to the labia, *procedentia*; if lower than the labia, *prolapsus*, &c. There appears however no need, either for practical or theoretical purposes, of making a distinction between the small variations of this displacement. It is therefore now, almost by common consent, divided only into two degrees, between which there is a plain and definitely marked distinction; and which differing degrees in their nature afford further distinction in occasional difference of treatment. According to this plan, *prolapsus uteri* expresses any descent of the uterus from its natural site, wherein it still remains above the os externum; and *procedentia*, any greater descent in which any portion, or the whole of the uterus is protruded through the vulva.

There is in favor of this nomenclature, at least some appearance of propriety in the proper and (slight) distinctive acceptance of these two words, which is not alike favorable to the other application of them. The former, or prolapsus, from *prolabor* means to slip, glide, incline, &c., whilst the latter is from *προπιπτω*—*procido*, to fall down flat, &c. which is at least, a stronger expression, and measurably implies a greater degree. It is true that the etymological ground for distinction of one from the other by these words is slight; but slight as it is, we think the nomenclature had better be *fixed* on that little which may fix it, than continue to fluctuate with authors to the great inconvenience of pupils and practitioners, and of patients themselves. We should not have felt so deeply the importance of this nomenclature, but for a strong case, which often presents the fact of the ruinous tendency of different names for the same thing in pathology. Although

our note is much protracted beyond what was intended, we feel it a duty to give a brief statement of this case, in this place.

A lady, on the eve of her marriage, ascended a chair placed on a table for the purpose of fixing her parlour window curtains, from which, by some unfortunate movement, she fell in such a manner that her nates first struck the floor with great violence; and a very severe flooding was the almost immediate consequence. This was, by various means, gradually moderated until she was enabled to be brought to town. I was consulted on her case, and decided, by the full current of external symptoms the existence of prolapsus. Some female friends more nice than wise, insisted that she should consult another physician, before she consented to the diagnosis. This was accordingly done, and the latter informed of my opinion. On being assured that the womb did not protrude, but that the external appearance was perfectly natural, he decided most positively that the former opinion was incorrect, that no prolapsus existed; assuring the patient that if it did, the womb could not fail to be visible externally. It was therefore concluded that her distresses were only the result of that debility which necessarily followed the hæmorrhage—that her complaints were chiefly hysterical, and that a course of tonic and antispasmodic treatment would speedily restore her. This being a much pleasanter suggestion to the patient and her husband, was accordingly adopted, and the patient remained subjected to it for some six or eight weeks. At this time I was recalled to her by her husband, who had discharged the attending physician, in consequence of having himself made an investigation which proved to him that the lower part of the uterus was just within the vulva, and the discharges from it copious and extremely offensive; indicating the approach of the case to one of the termination of this unpleasant disease when neglected, to which I had directed his and his wife's attention. On the touch, I found the anterior part of the cervix of the uterus immediately in the rear of the punctum urethræ, where it was very firmly attached by the inflammation which had preceded the ulceration. The posterior lip and half of the cervix, as high as the middle of the great cavity of the body was lost by ulceration, and an extensive ulcerated and suppurating surface presented, occupying the whole internal surface of the uterus. I caused the discarded physician



to be recalled, in order that he might be convinced of his error; but he persisted in the opinion that there had been no *prolapsus* in the case, but freely acknowledged that he knew there was *procidencia*, which he had hoped to cure by strict attention to proper position in bed. The lady was greatly emaciated, and in that state of debility, and laboring under that dreadful train of nervous distresses, which generally attends the extremity of these cases when their proper treatment is too long delayed. By great, unremitting effort and attention, with the excellent conduct of a patient of good sense, the ulceration was perfectly healed within about two months. But before the progress could be arrested, not less than two-thirds of the whole uterus was destroyed; and on healing, a smooth cicatrix covered the posterior face of the remaining portion. This was nearly five months after the occurrence of the accident. No menstrual return had ever taken place since the accident, nor had there been any sanguineous discharge from the part after the suppression of the first hemorrhage, except at about two months after the accident, when the ulceration was at its greatest extent, and probably, from the return of the menstrual impulse, a hemorrhage considerably copious appeared for a short time, but which was, from its excess, promptly checked. The menstruating organization was destroyed, and as the process of healing progressed, dull pains in the chest acceded, with cough—abscesses and ulcerations in the lungs;—and death closed the scene in the eighth month after the accident. All this was doubtless from the apparently trifling facts that the attending physician called a descent of the uterus without the vulva, *prolapsus*, and that in which it does not appear externally, *procidencia*; and that he depended, for the cure of this latter, solely on *position in bed*.

The exact dates of this case I have, with very accurate coloured crayon speculum views illustrating the ulceration in its different stages, and the final appearance in healing.—*Ed.*

## PART II.

## REVIEWS AND EXTRACTS.

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*The Young Mother's Guide, and Nurses Manual ; containing advice on the management of Infants, and conduct to be observed by the mother before and after Child-birth. By RICHARD S. KISSAM, M. D. Second edition ; Hartford : Belknap & Hamersley—1837 ; small 12 mo. p. p. 152.*

THIS is the title of a small volume which has issued from the Hartford press during the present year. Its title page at once attracted our attention, alike by the subject treated on and the name of the talented and experienced author. There has always and every where in this country been a crying necessity for a much greater extent of knowledge on the part of young mothers and nurses, relative to the management of lying-in woman and infants, than has been accessible to the proper reader. We say proper reader, not because the contents of this rich little volume would be unsuited to the eye of the best practitioner, or any one else ; but because, intended as it is for the instruction of mothers and nurses, relative to such matters as do not ordinarily demand the presence of the physician, its value would be measurably lost if not diligently read by those classes themselves to whom it is addressed. Indeed the want of so concise and judicious a collection of instruction—the result of long and extensive observation under the guidance of ample science, cannot fail to meet the necessities not only of every beginning practitioner, but also of most of those who have passed many years in professional life. However closely general practitioners may have directed their attention to the discharge of their duties, it is but with a very small proportion that we find any thing like that thorough knowledge of the female economy, and the physiology of the infant to enable them to reason correctly for the prevention of disease and

the promotion of the best corporeal and intellectual developments. And of the small proportion who do by experience, come to possess themselves of what may be, and is commonly considered by the physician, minor science, and useful chiefly in the nursery, but a small proportion again of these are sufficiently communicative, conscientious, and at leisure to enforce instructions on the too thoughtless and inconsiderate patients and nurses. But the great sum of necessity for such a manual is in the country generally, where even physicians cannot be conveniently consulted, and in southern towns where there are no nurses but such as are drawn from the rougher occupations of life by the temptation of wages, with but little experience and less mental cultivation.

The little volume before us is probably as unexceptionable in all respects as is possible for a production of the kind to be.—The interest the practitioner takes in reading it may lead him to lament its brevity on some, and perhaps all the subjects, until he reflects that most of young married women and almost all nurses, have not that forecast which should lead them to much reading; and if a volume of considerable magnitude, though replete with matter of great interest, and concisely written, be placed in their hands, it appears so great a task that it is entirely neglected, or so superficially scanned as to afford only a few disconnected facts and many of them of least importance—a knowledge not unlike that generally obtained by females and others who read treatises superficially; and is much more calculated to do harm than good. The reader then becomes satisfied that, as he could not consent to omit a sentence and scarcely to alter the arrangement of one, the plan of the work could not have been better laid for the greatest usefulness.

Nor is the work a mere collection of precepts valuable in themselves; for whilst these are concisely and beautifully set forth, the understanding is enlarged by an accurate and perspicuous developement of their necessity and their reasonableness, an example of which we give in the following extract. It will be also seen therein, that the author has not failed fully to understand a subject of greatest importance and generally neglected by physicians, (i. e.) the proper adaptation of mental exercise to age and constitutional powers, for securing the best mental and corporal perfection which is attainable.



The "*subsequent management of the child*" he arranges under four heads:

I. Of the child's food.

II. Of the child's dress.

III. Of the exercise proper for the child.

IV. Effects of mental cultivation upon the child's health.—

The iii. and iv. of which we extract.

III. *Of the exercise proper for the Child.*—As soon as the child commences walking, the proportions of its body begin to assume a more perfect character. Exercise strengthens the muscles, and reduces the quantity of fat; the limbs become stronger, and the abdomen more flat. The child should not be forced to walk. It ought to be allowed gradually and voluntarily to take the erect posture. The legs may become crooked from too early walking. The hip joints are easily injured at this tender age, and I have no doubt that a large number of children laboring under "hip joint disease," became so by being urged to walk when too young. The exertion to their imperfectly developed joints and muscles must be immense. As soon as the child walks firmly, he should be taught to exercise carefully and to avoid jumping, especially from such objects as chairs, tables, &c.

The open air is the only proper place for exercise. When the weather is mild, children should spend much of their time out of doors. The morning and evening air is to be avoided.—After the dew has left the ground in the morning, and before it is formed in the evening, are the hours best calculated for their exercise.

All violent exercise should be prohibited, such as very fast running, jumping over fences, down steep banks, or climbing up trees. It not only exposes the child to severe accidents, but is positively injurious to the proper development of the frame.

The bones of young children are tender, and easily bent or broken, and their joints are not fully developed; hence any *violent* exercise tends to injure them. I do not mean to say that the free and unrestrained use of the limbs should not be allowed, but that children should not be urged by competition to deeds beyond their strength. Let them frolic and play as much as they please, but do not permit them to risk their limbs and lives by "extraordinary feats of agility." Children accustomed to the air are far less subject to catarrhal and inflammatory diseases. They acquire a vigor of mind and body to which children immured in a nursery are strangers. Their muscles are more fully formed, their complexion more healthy, and their digestion more perfect.

And again—

#### IV. *Effects of Mental Cultivation upon the Child's Health.*

The education of children cannot be too early commenced. Even in extreme infancy, the moral character begins to develop itself; and as man is naturally inclined to evil, so the first voluntary actions frequently require correction.

Childhood is the *time* for moral cultivation. It is the proper season to impress elementary religious truths. The mind, although naturally possessing a certain conformation peculiar to each individual, is greatly modified by early education. The sacred volume says, "Train up a child in the way he should go, and when he is old he will not depart from it."

This direction alludes to moral and religious cultivation, rather than to mental discipline. No one who receives the word of God as our unerring guide in duty, can doubt the importance of thus early impressing the minds of children with religious truth.

It is otherwise with regard to mental cultivation in its more extended sense. The brain, which is the apparatus of the mind, does not arrive to complete organization until about the seventh year. Before this period therefore, no task which requires any great degree of mental *effort* should be imposed. Children have a certain aptitude for learning the elements of all kinds of knowledge, far superior to the adult. This, no doubt, is the provision which the God of nature has instituted to prevent, or render unnecessary, a long continued effort of the child's mind. When we consider the utter ignorance and helplessness of the infant when ushered into the world, we are led to suppose that we cannot too early commence giving it instruction, and urging it to mental exertion. Children learn principally by imitation during the first few years of their existence, and the exercise of this part of the mind does not appear to produce any bad effects. If the reasoning capacity of the child be urged to action, before the mind has acquired facts to reason upon, then the exercise of the reasoning faculty produces injury, because it is called upon to construct without materials, or in other words, to arrive at conclusions without premises.

Whenever the mind is called upon to act, an extra quantity of blood is sent to the brain; and though this extra quantity is very small, still a long continued flow of it to the delicate and immature brain of the child, is apt to produce disease. A blister applied to the skin will cause an extra quantity of blood to go to the spot where it is applied, and this is caused by the stimulating quality of the blister salve. Thinking acts on the brain in the same manner as the blister does on the skin. If a child be allowed to think too long, the blood which goes to the brain will produce a kind of irritation there, which is apt to lead to inflammation, sometimes terminating in dropsy of the head. But the irritation, even if it does not end in inflammation, if kept up

a long time by the cause which produced it, does not readily subside. The Consequence is, the brain is soon worn out. This is caused upon the same principle as blindness, when produced by looking at a very bright light. The eyes lose their power of vision, because their nervous energy becomes exhausted. They were used so fast, that nature was incompetent to supply the energy as fast as it was lost.

The food we eat is converted into blood, which furnishes the supplies necessary for restoring the lost energy of the system.

It is impossible to lay down rules for the regulation of all children. The minds of all vary, and some come forward much earlier than others.

Children generally prefer play to study; and the reverse of this is very rare. I am inclined to think too much has been said on this subject of late, to induce parents to postpone their children's education. The mind is active; it must be exercised on some subject. It cannot be folded in a napkin and laid aside. Its province is *action*, and act it must.

Great care is necessary to direct this action into the channel. If the parent discourage the enquiries of his child for knowledge, he will seek it elsewhere. Knowledge he must and will have, and perhaps he will draw it from a polluted source. This will be destructive. It will encourage the passions to the detriment of his reasoning faculties.

Those children who have a great desire for knowledge, are indisposed to muscular action. Great muscular action or continued exercise, is incompatible with much thinking, and hard study. This is owing to the fact that the blood is sent to the limbs, and retained there by exercise. The brain of course cannot have an extra supply. The best course, therefore to be pursued with children who are disposed to too much study: is to induce them to exercise freely; and in addition to this, they must be furnished with simple food, and a hard bed. This will restore the balance of circulation.

Children having a diseased brain, are very apt to exercise the mind too much; when this is the case, the family physician should be applied to for advice.

But we must deny ourselves the pleasure of any thing like a detailed analysis of the book before us, as we cannot republish the whole, and know not what we could omit. Its contents are arranged under four different parts. The first contains xxv. concise chapters, on the subjects of the qualifications necessary to constitute a good nurse; engagement of a nurse; her conduct in the sick room; her duties during labor; treatment of the mother immediately after child-berth; treatment of the child



immediately after its birth; washing the child; dressing the navel; of the belly-band; dressing the child; feeding the child; putting the child to the mother's breast, &c.; feeding the child when the mother affords no milk, or only a partial supply; management of the nipple before and after child-birth; food of the mother; her general treatment during the month; temperature and ventilation of the room; bed curtains; management of the child at night; wants of the child; on crying; general treatment of the child during the month; on the mother's assuming the care of the child; its subsequent management, and the conduct of the mother during lactation.

Part II. treats on the "diseases of the child,"

Part III. on the diseases of the mother, and

Part IV. on teething, weaning, administration of medicines, signs of pregnancy, and conduct to be observed during gestation; all of which are treated according to the soundest principles of physiology and pathology.

In concluding the pleasant task of noticing Dr. KISSAM'S book, we feel that we cannot say less than that it is a cheap little book, without the thorough knowledge of which no woman should come to the bed of travail—no nurse to the lying-in room, and no physician commence, or (if he has commenced,) continue the practice of his profession with females or infants.

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*Thymic Asthma\* of Infants; a disease hitherto but little known, and imperfectly understood.*

THE thymic asthma of infants is a much more common disease than is generally believed. Every one has seen infants born with a difficulty of respiration, and die in a few weeks, or even months, without ever having been relieved, and without their death being accounted for. Indeed, life is so uncertain in the early ages of infancy, that the victim has been rather regarded as a tender plant unable to take root in the new soil to which it has been removed.

It was however, evident that the cause of death, whether remote or proximate, was to be traced to the respiratory apparatus, and that the disease partook of the character of the asthma de-

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\* Asthma Thymique.

scribed by MILLAR, although more slow in its progress and presenting paroxisms of greater frequency and shorter duration. MARCH, of Dublin, having seen an infant suddenly expire from suffocation, attributed its death to spasm of the glottis; but it was a mere conjecture, which he did not attempt to verify by autopic inspection. He did not think of the thymus, which, being subservient to fœtal existence alone, should subsequently dwindle away. MARCH was in error, for HOOD having opened six infants who had perished from this *spasm*, found the thymus preternaturally enlarged. The publication of these cases awakened the attention of observers—authors were consulted, and it was found in the works REICHA and VEDRIES, published a century ago, that the asthma of new born infants is frequently caused by *hypertrophy of the thymus*. More recently, Dr. FRANK taught that *infantile asthma* is often occasioned by an extraordinary enlargement of the brouchial glands and thymus. In 1810, Dr. BRERA confirmed this ascertainment in an infant who was suddenly suffocated when but a few weeks old. Such was the analogy of this case to those related by MILLAR, that it would have been considered the same had not the examination been made; but most of what we know satisfactorily of this disease, we owe to KOOP, who has collected a large number of cases in his own practice as well as in that of his friends, in a memoir on the subject, read before the Academy of Heidelberg. He gives the following characteristic symptoms: 1st, periodical suspension of respiration, attended with piercing shrieks and anxiety; 2d, a return of suffocation when the child awakens, cries, or attempts to swallow; 3d, the habitual projection of the tongue, the extremity of which remains between the lips; 4th, the trismus which supervenes and produces death. Such are the phenomena presented in *infantile asthma*. KOOP looks upon the main diseases as located in the thymus, whose enlargement obstructs the air passages and the freedom of circulation.

BRERA fully concurs with KOOP, appreciates the symptoms, details the organic alterations, and enumerates the remedies proposed by clinical practitioners. He states that thymic asthma attacks infants three weeks old, though more frequently those from four to ten months, and sometimes even eighteen months of age. It is indicated by either one or more *pathognomonic* signs. The inspiratory sound is analogous to that of pertussis, but more sharp and piercing. Five or six inspirations will be heard before an expiration; the latter is noisy like that of a violent paroxism of asthma, and respiration remains entirely suspended; should the infant not perish immediately, the sharp cries will be continued at each short and interrupted inspiration, until free respiration be restored.

*Collateral symptoms.*—There is nothing peculiar in the other

symptoms attendant on this disease. They partake of the impeded state of respiration, and resemble those of hysteria, asthma, and other suffocations. For instance, the chest is thrown backwards, the countenance is anxious and oppressed, the face passes from the livid to a state of paleness, the nostrils are in motion, the eyes fixed, the hands cold, the thumbs contracted, and the excretions sometimes involuntarily discharged, the paroxysm continues from thirty seconds to two or three minutes. After the paroxysm, the infant again moans and feels uneasy ; but soon returns to his natural state. He nevertheless remains for sometime pale, languid, and disposed to drowsiness. On comparing one of these infants with others in the enjoyment of good health, he will be distinguished by the projection of his tongue more or less between his lips, and by the indistinctness of the heart's action between the paroxysms. Whenever the child exerts his organs of respiration, either in crying, laughing, becoming in a passion, swallowing with avidity or gaping, he will be threatened with suffocation. In the beginning the attacks recur every eight or ten days ; but they subsequently increase, become daily, and have even been known to return twenty times in four and twenty hours. It is not unusual to see the little patient fall, as though stricken by lightning, at the moment he begins to laugh or to cry ; yet infantile asthma most commonly assumes the chronic character, and terminates in convulsions of an epileptic character. The lumbrical muscles of the hands and the adductors of the thumbs, are always contracted ; the period of danger may continue from three weeks to twenty months ; and the signs of approaching death are those of apoplexy and of asphyxia.

What then is the nature of this asthma ? Its symptoms alone would never have revealed it without the scalpel. All the phenomena of life proceed from the circulation of blood, respiration and innervation ; the encephalon and its dependences exercise an intimate influence on the heart and lungs at the same time that it is itself subjected to the influence of these. These three organs exercise their functions in a state of subjection to each other ; they are united by compact.

Let us for a moment suppose the vital power to be located in the encephalon ; it will be from this centre transmitted by the nerves to the heart ; the blood thrown by the ventricles may be considered the vehicle of life ; and the lungs provide air for the renovation of this blood. Thus these three prime organs produce and sustain life ; each calls into action the two others, and neither can act of itself. If therefore the air of the lungs, the blood of the heart, or the nervous fluid of the encephalon, be lacking, death is the immediate consequence ; the being may pass from life to death without gradation of transition. The practitioner might then have predicted, on seeing an infant die



suddenly on awaking or attempting to laugh or to gape, that either the primary or secondary cause of death would be found in the brain, heart, or lungs. The skin is livid, the blood is found stagnating in the brain and lungs; the heart is flaccid, and sometimes still perforated by the foramen ovale; but the principal and the most constant lesion is hypertrophy of the thymus.—Here is the seat of the disease; the excessive development of the gland extends longitudinally, laterally, and usually in thickness. The lungs are compressed by it thrown back against the arterial, venous, and nervous trunks, with which they contract adhesions more or less extensive in the neck and chest; the thymus has repeatedly been found spreading like a fringe and firmly embracing various parts. The tissue of this gland is sometimes normal, though most frequently hardened, reddened, more fleshy, without being manifestly indurated, inflamed, nor carnified, nor indeed transformed in any way. When cut through its centre, a milky humour is seen to flow. Its weight varies from six or seven drachms to one ounce. Dr. BRERA has seen the thymus two inches wide, and extending from the thyroid body to the diaphragm so as to compress the trachea, lungs, heart, vessels, nerves, &c. in its way. In another instance he found it adhering to the thyroid gland and covering the whole heart in such a manner as seriously to impede and almost prevent its action.—In a third child, the thymus presented prolongations entwined around and compressing the jugular veins and carotids as well as the arteria innominata.

The predisposing causes of this disease are constitutional debility of the infant, diseases of the uterus previous to and during pregnancy, predisposition to glandular affections peculiar to certain families; there can be no doubt that bronchial catarrh, dentition and abdominal diseases, complicated with enlargements of the mesenteric glands, may favor the development of thymic asthma.

The prognosis is always alarming. There are no means of prevention, and the disease left to itself is always fatal. The author thinks however that by timely and diligent attention its progress may be arrested. He indicates the course to be pursued during the paroxysm: the child should be seated and inclined forward, when slight thumps should be made on his back to facilitate respiration; if the pulse is imperceptible, endeavors should be made to restore the circulation by the horizontal position and sprinkling the face with cold water; if the brain be congested, leeches are to be applied to the sides of the neck and over the superior intercostal spaces. After the paroxysm, the remaining spasms may be combatted with small doses of laurel water, tincture of assafoetida, musk, or cyanuret of zinc.

The radical cure of the disease may be attempted with some

hope of success when the infant is robust, by resorting to repeated local depletion, active cathartics, alternated with laurel water or hydrocyanate of morphia. The depletion and purgatives will be more cautiously used when the patient is less robust, and antispasmodics more relied on; for instance, the twentieth part of a grain of musk and as much of acetate of morphia may be given three or four times a day. Regimen constitutes the main part of the treatment for the reduction of hypertrophy of the thymus, but should be aided by revulsions and discutients. In this manner good effects have been obtained from the ointment of tartarized antimony applied over the sternum; unctions made with the muriate of barytes are still better; whilst either of these ointments are used, the arms should be alternately blistered, but not with cantharides, antimonials combined with mercurials, iodine, animal carbon, extracts of hemlock and of the garden marygold (*calendula officinalis*, of L.) and the preparations of gold may be administered internally. The Milanese physician cites three cases he cured by this practice, two in 1831 and one the present year. The title of this memoir should then express that the thymic asthma though known was reputed incurable previous to Dr. BRERA'S publication.—*Journal des Connaissances Medico-Chirurgicales*, 1837, p. 73.

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### Cataract.

During the last three years, M. SERRES, of Montpellier, performed the operation for Cataract seventy times, of which sixty-two were successful. M. S. prefers the *displacement* of the lens, and operates on but one eye, usually the left. The subsequent inflammation has always been either very slight, or readily subdued by depletion. The ascension of the lens has sometimes necessitated a second operation, which has been equally easy and successful as the first. M. S. recommends the anterior portion of the capsule to be carefully lacerated before removing the lens, for the partial or complete opacity of this membrane is an occurrence he has not always been able to prevent.—*Ib.* p. 80.

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### *Modification of the usual method of reducing Dislocation of the lower jaw.* By M. E. BERNARD.

A man about fifty-five years of age, having dislocated his lower jaw by gaping, called in a physician who endeavored in vain to replace it. The next day he went to the hospital, and submit-

ted again to new efforts without relief. It was endeavored to overcome the muscular resistance by bleeding, when M. BERNARD was called and at first failed. He however determined on a new method; the patient being seated on the floor with his head between the knees of an assistant, the surgeon sat in front of him and placed his left knee under the patients chin. His thumbs were then introduced into the mouth for the purpose of depressing the condyles at the same time that the chin was rendered immovable by resting on the knee. The resistance was overcome, and the condyles carried backwards at the same time that the chin was elevated by the knee. The dislocation was thus readily reduced, although the usual methods had proved unsuccessful.—*Journal Hebdomadaire, T. iv. p. 30.*

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M. MOREAU'S *Report on M. CHASSINAT'S work on Serous Metorrhœa, or Uterine Discharge.*

1st. Serous metorrhœa occurs at various stages of pregnancy, and constitutes a real disease.

2d. In the great majority of cases, the fluid discharged is secreted between the inner surface of the uterus and the fœtal membranes, after a separation of these membranes from their attachments. This is invariably the case when the flow is abundant and repeated.

3d. The most common causes of this secretion are geneal plethora, and uterine irritation, such as most frequently succeeded external violence.

4th. The pathognomonic symptom of the disease is a discharge from the vagina of a fluid usually limpid and tenacious, of a citrine colour, and sometimes attended with painful contractions of the uterus.

5th. This disease leaves no anatomical lesion visible.

6th. This flow is usually dangerous neither to the mother nor child. Pregnancy goes on as usual, and the liquor amnii is not diminished in quantity.

7th. With regard to the treatment, there is usually nothing to be done, unless the plethora should be excessive, in which case venesection should be resorted to. In no case should the progress of pregnancy be interrupted or labor be interfered with from this cause alone. Parturition will not be affected by it.—*Journal Hebdomadaire, T. iv. p. 29.*



*Remarks on Itinerants—Mercury.*

We extract from the *Boston Medical and Surgical Journal* for March, 1837, the following remarks on Itinerants, as being evidently the fruits of observation. We have only to regret that the author did not append his name, that the weight of his character for the experience we judge he must have had, might have added its force to the power of the truths detailed.

"Pison Mercury done this," said the puffed-up empiric, while dealing out his cure-all for the sore legs of a poor old man, who had not been sparing in his younger days of the cup that maketh the heart glad for a little while, but bringeth sorrow in the end. "Pison Mercury done this," said the aunts and cousins, as they each in their turn came in to pity the old man for his pain and inability to walk. "Pison Mercury" and Mother Eve have a great many sins to answer for, which they never knew anything more about than the rock in the quarry, or the child unborn.

We consider ourselves an exalted people, and a civilized people; but we are not half so far in advance of barbarism as we think. The eastern potentate, who makes it penal for his physician to meet with ill success in practice, is as reasonable as we in many respects are. The natives of the interior of Africa, when they murdered Mungo Park for not being particular enough in his veneration to a particular kind of tree, which they worshipped as a deity, were not more superstitious and inconsistent than we in some instances are. Notwithstanding we have light to direct us, we will not be guided by it. Like some idolatrous nations, who deify and worship the most loathsome reptile, we place confidence in persons of the least acquirements, of the most mistaken confidence in their own abilities, and the most ill-deserving of public confidence, allowing their knowledge to be as great as they would have people think it to be.

"Pison Mercury," which there is so much said about, in skilful hands is one of the best remedies which the medical practitioner has hitherto become acquainted with. It is, like a great many other things, denounced partly because it has merits. We seldom behold a man of sterling merit without enemies. As those are the best fruits which the birds have been picking at, those things are often the most worthy of being confided in, which have the most strongly been spoken against.

The very persons who bestow so much contumely upon mercury, if they know enough to distinguish one medicine from another, use it themselves when they think they can do it without detection. They slander it to bring themselves into notice. Like

the thief who mingled with the crowd, and cried "stop thief," they sometimes abuse it to screen themselves from suspicion. From some such way, and for this more than for the benefit they intend by it, they create for themselves a hobby upon which they too often ride triumphantly over the heads of their more deserving brethren of the medical art.

I once knew a man by the name of Sprague, who was so boastful a quack, that many people thought he was almost a prodigy in the art he pretended to understand. One of his idolizers, after having vented his spite at "pison mercury" and "poticaries," showed me a weed that Dr. S. used as a substitute for "macury." I told him there was no virtue in that, and that I could eat a hat full. "To make it more vartuous," said he, "he adds a leetle corrose of sublimate." Corrosive sublimate, you mean, said I. How much do you call a leetle? "Why about five grains, or as much as you could take up on the pint of a jack knife." That is enough to kill a dozen persons, said I. Calomel, the preparation of mercury which is most generally used, may be given in tea-spoonfuls without danger. Corrosive sublimate, if given in the quantity of a grain of sand, would endanger a man's life. He was astonished. He could scarcely be persuaded that I was not trifling with him. "Dr. Sprague use mercury? It could not be. He talks more against it than all the doctors I ever know'd." He had a terrible load upon his mind, until he saw Dr. Sprague, who made him believe that corrosive sublimate was a vegetable.

We never see a person, good, bad, or indifferent, and the remark is frequently made, who has not some friends. "Mercury," as those who are opposed to its use call the various preparations used as medicine, has its friends, and I am willing to be ranked as one of them. Though anathematized by quacks and their unconscious dupes, it is a valuable medicine, and could not well be dispensed with in general practice. By those persons it is asserted to be a poisoner of the blood; but there is more evidence of its being a purifier than a poisoner of this important fluid. When a person is afflicted with an obstinate humor, the common supposition is that the blood is in a bad state. Mercury, in some form, is the best remedy of anything which has been discovered. Syphilis is supposed to poison the blood. There is, in all varieties of this disease no certain specific but mercury, and this seldom fails. In affections of the liver, which with much propriety may be said to injure the blood, mercury is generally the best remedy that can be administered.

By its susceptibility (power?) to operate upon every viscus and every gland, it may almost be said to be a universal purifier. When the bowels are loaded with impurities, it very readily evacuates them. When the stomach wants cleansing, as it is of-

ten called, it is more effectually operated upon when calomel is used in combination with some other emetic.\* (Cathartic?) In combination with diaphoretics, it operates upon the skin, producing a most salutary diaphoresis. The biliary vessels are more effectually emptied by calomel than they possibly can be by anything else. Even the salivary glands, much to the sorrow of the patient, if not to the physician, are very sensibly, perhaps too sensibly, operated upon by mercury.† In fact it operates upon every part, and all other medicines belonging to the *Materia Medica* cannot be made to effect so many salutary purposes as this abused and despised article. It has, to speak figuratively, a sort of saponaceous quality, calculated to cleanse every part. I have used it in several thousands of cases, and were I put upon my oath to testify whether it had done good in every case, I could not pick out a single case where it had done hurt, or left the system injuriously affected at any time afterwards.

One case in which I used it was that of a little girl, five years of age, so interesting on account of her beauty that she might with propriety be compared to a rose bud. She used it after all other remedies had failed, in doses of a teaspoonful heaped up, once in six hours, for a week, as a vermifuge. The result was, the worms (*tænia*) were expelled, to the almost incredible number of one hundred and twenty-five; restoration to perfect health fol-

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\*The propriety of the author's expression here does not strike us clearly, in saying "in combination with some other emetic." This would seem to declare Mercury to be an emetic. If so, it requires correction, because emetic operation is not the characteristic power of the mercurial preparations in use in practice. The proto-chloride (calomel) and the black oxyde (in the form of blue pill) are the forms the operation of which is alluded to by the author. Again: If he mean the combination of these with some emetic, which would have been better expressed by the omission of the word "other," we must object to the correctness on another principle. Combinations of brisk cathartics with emetics are often very happy in their effect—first evacuating gently and to a limited extent by emesis, by the emetic, the quicker operating power; and then by purgation—effected by the cathartic in combination with the secondary tendency of the emetic power. Such is the operation of the very common emeto-cathartic of salts and tartar. But calomel, the favorite cathartic form of mercury, is not generally more desirable as a brisk cathartic than other hydragoge purges, (for this is one in large doses.) But the greatest excellence of calomel is not in its brisk purgative operation or its action as a cathartic on the first passages, which I have called its primary operation; but in its secondary or action on the liver whereby this viscus is made to throw an unusual quantity of its secretion into the intestines which (secretion) proves cathartic. And again: If the author has used the word "emetic," for "cathartic," the combination is not so applicable to the "cleansing" of the stomach, as the former part of the sentence would lead the reader to suppose.—*Ed. S. M. & S. J.*

†Long and close observation has brought me to the conclusion that the action of mercury in any form on the salivary glands is of very little curative value. I am not able to believe that it has ever shortened a fever one hour. Its only utility then, (which is more than counterbalanced by the severity of distress afforded) is limited to its serving as an index to the state of mercurial excitement, which may be as well determined by other indices; and were it in my power to deprive this invaluable medicine of its sialogogue, without injuring its other powers, I should have no hesitancy in doing so.—*Ibid.*



lowed, and she has since grown to maturity and is now an amiable young lady of exquisite beauty.

In two cases of melancholy, occasioned by hepatic affection, mercury effected a cure, when other remedies which had been resorted to produced no benefit. In the most violent case of mania I ever saw, after making use of all the more common remedies to no purpose, I gave calomel, first in large doses to produce catharsis, and then small ones, often repeated, to produce ptyalism and effected a cure. A very remarkable feature in this case was the state of the skin. Without being affected with any supernatural heat, it was dry, husky, and scaly. The scales were large, sharp-edged, exhibiting, when the patient was enraged a bristling and erect form, reminding one of the quills of a porcupine. This affection was perfectly changed by the calomel, and the skin assumed the pliability and softness of a little child's. When the glands were restored to a healthful state, the mania was perfectly removed, and since that period, which was three years ago, the patient has remained hale in body and mind.

From the prejudice existing against mercury, and from its liability to affect the glands when this is not desired, I use it at no time when any thing else will answer as well; and never, unless the patient or his friends are willing. Like fire, water, and everything else which has been subsidized to useful purposes, it may do hurt, and ought not to be resorted to by those who do not well understand their profession; and not by those who do, when anything else will do as well.

All that is designed or intended by these remarks is the removal of the prejudices which ignorance and empiricism have propagated and fixed upon the minds of well-meaning people. One thing is desirable in regard to it, and that is, that its effects upon the salivary vessels could be prevented when desired; but then it would be too valuable a medicine for mortals to enjoy.

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### *Pathology and Treatment of Dysentery.*

[The following observations are from the pen of J. G. DAVEY, M. R. C. S. L., as taken from a late foreign journal by the *Boston Medical and Surgical Journal*.]

The prevailing notion is, that dysentery essentially consists in an inflammation of the mucous membrane of the intestines, more particularly the large intestines. This condition is looked on as the cause of the symptoms of the disease, and the treatment is directed to the removal of inflammatory action. In protracted examples of the disease there are to be met with un-

doubted evidences of the existence of inflammation, and inspection, post-mortem, very unequivocally demonstrates its usual disorganizing effects; but I feel disposed to look on the phlegmon of the mucous tunic of the alimentary canal as the result of a continued and efficient cause, operating locally.

The presence of acrid, unwholesome, and indigestible substances in the *primæ viæ* excites an undue and irregular peristaltic action of the muscular coat of the intestines, accompanied with increased secretion, for the purpose of carrying off the offending matter, and thus allowing the parts concerned to re-acquire their normal condition. Such are nature's efforts to relieve herself, and in some mild cases it is possible that she will succeed without any medicinal interference, but, in the greater number of cases, the symptoms will become aggravated. There will be a troublesome diarrhœa, loss of appetite, and general indisposition, which, after continuing for a few days unrelieved, or being unattended to, will often be succeeded by those of a dysenteric character.—In the majority of cases, at the commencement, there will be little or no febrile disturbance of the system, or local pain. If the abdomen be examined, no unusual sensibility of its parietes, or increased temperature, will be found. In those cases where the quality of the ingesta has been of a highly offensive and irritating character, the symptoms will be proportionately severe, even at their approach, and will, in a very short time, assume all the characters of acute dysentery. An untimely saline, or a drastic purgative, I have known to establish, very quickly, the severest type of the disease; and thus are we led to trace the analogous effects of different irritants on the mucous membrane of the intestines.

The treatment which I have so successfully adopted in a great number of cases of acute dysentery has been this: On my first seeing my patient I direct the following formula. R. Powder opium, half a scruple; blue pill, six grains; tartarized antimony, one grain; mix. Make six pills, of which one is to be taken every alternate hour, in very severe cases—more commonly every four hours, and never without the greatest benefit. If the tenesmus, or strangury, be very urgent, an opiate suppository, or an enema, may be prescribed, with much advantage. After some hours the patient will invariable express himself as being much relieved, and at the same time he may very properly take a teaspoonful or two of the milk of sulphur, or a small dose of castor oil. The sulphur I have found to answer the purpose better than any other medicine. A moderate perseverance for a couple or three days, with these means, I have invariably found sufficient for every purpose.

The daily administration of a mild laxative is highly necessary and judicious, throughout the course of the disease, in order to

excite the functions of the excreting organs, and to evacuate such morbid secretions as may have collected.

That the pathology of dysentery, in its early stage, embraces something else than inflammation, is established, I think, by an unprejudiced review of its symptoms, and by the particular treatment above specified being so singularly efficacious, which few would consider as other than extremely unlikely to combat acute inflammatory action, occurring in any portion of the intestinal canal.

If the disease have been, from its commencement, unattended to, or ill-treated, we shall then speedily find inflammatory action set up within the abdomen, and which, if not subdued, will lead to incurable disorganization of structure.

We are much pleased with the above remarks, because they comport well with observation. We have long practiced on the same principle, as far as the primary inflammatory nature of this disease is concerned. Formerly the dover's powder or opium was our first prescription ; but latterly, opium and calomel.

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### PART III.

## MONTHLY PERISCOPE.

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### *American Medical Association.*

By reading an account of a convocation at Southampton, England, for the purpose of forming a southern branch of the Provincial Medical and Surgical Association, it brought strongly to mind the importance of forming a great National Medical Society, which we have repeatedly urged through the pages of this Journal, upon all true friends of medical science, in the United States. If some manifestations of interest towards the accomplishment of this desirable object are not made within the present season, we shall be compelled to acknowledge that there is no spirit or energy remaining among us. Nothing could contribute so effec-



tually to a perfect system of professional good fellowship as this; and the good influence which would be exerted throughout the union by a National Medical Society, cannot be calculated.—*Boston Med. and Surg. Journal*, for March, 1837.

We have been pleased to see the anxiety of the editor of the *Boston Medical and Surgical Journal* for the establishment of a great National Society. It proves not only a laudable, but an honorable zeal for the true interests of the profession and of humanity. Our profession has always been too little fostered in this country. It has been left by the state to work its way onward if it could, through any embarrassments; and not only so, but difficulties of insuperable nature have been cast in its way, and its benefits when on its own footing and responsibility, dragged from it by state power. These influences have tended so to curtail the income of the practitioner, as to cause him to seek fortune or renown in some other occupation.

If we cast our eyes over France, we behold her, by virtue of state patronage, now the medical emporium of the world, with her thirty or forty thousand medical students from all parts, and this in the face, and under the frowns of her ancient neighbors who formerly led the van of medical science. This state of things is not only calculated to add to her fame an imperishable nature, but to prove a source of wealth—a fountain of plenty, continually teeming into her metropolis the treasures of the world. But it is altogether probable that whatever of value is to be effected for the profession here during the present generation, must be commenced by individual effort, and continued and accomplished by combination of the same.

It is strange that the cause of humanity should not be more studied by legislators; for then they might be able to see the propriety, (the necessity, if they would preserve themselves from the crime of being accomplices in the work of death and destruction,) of refusing to legalize manslaughter by a parcel of swindlers—the worst of swindlers, who can venture to strike in the dark, for gain, the delicate nerves of life, in the hardihood and coolness of their perfect ignorance of them, and of the force they use. We mean those who call themselves “botanic doctors.”\* Our

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\*A title truly, which no human being on earth would commit a more unjust usurpation in assuming than steam doctors, as there are none who know less of the science of Botany.

estimate of the human intellect must be considerably lowered, before we can be made to believe they are not sensible of their *high moral error*. What "boots it" then, whether the blow be struck with the dirk of the cold-blooded assassin, who is bribed to kill, or by a poison, or a ruinous course practised on the powers of life under the name of botanic medicines, of whose true power, as well as of the structure and vital powers to which they are applied, the administrators are in absolute ignorance. Better—more noble it were to steal—far more so to rob on the highway, or to pirate on the seas! Here man would meet man in some way—and risk immediately, retributive justice.

Legislators we say might not only see the necessity of refusing such a cruel gratuity—legalizing so horrible a crusade against human life; but also that of extending a fostering hand to true science, and the true means of state independence. They might come to remove obstacles†—offer inducements, and patronize in many ways those institutions which are truly necessary, and thus make their country the boast of scientific, as it is of civil institutions. A country free of national debt, and able to pour forth her golden streams of wealth from her overflowing treasury, back to every tributary state, knows no limit to her means. What indeed might she not accomplish? A grand National Medical College, at any expense, would be but a handsome plaything for her treasury—but glory and independence would crest its lofty domes, and wealth turn back its course from foreign lands.

Here should be the mark set before us—a National College, which *alone* should confer the *Doctorate*; all other institutions subsidiary; limited in their honors to the first degree; and compelled to continue their annual course eleven or twelve, instead of three or four months. But this cannot be done until the members of the profession exert, by the resistless impulse of high worth, an influence proportioned thereto. They must go on. *Zeal and enterprize* must urge them onward in the sure road to professional worth.

In its common details, the profession is a solitary one; one which favors but little association in the ordinary course of business. The philosophy of it is boundless; but each practitioner is limited to what he knows when he first sets out, and what he can alone

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†The suppression of practical anatomy. See Penal Code of Georgia.

gather on his solitary way. Let us then plant our general associations in every state and territory, to be made up of representatives from every society; and if you please, a grand national convention made up of a suitable rate of representation from the state associations. Or, if this be thought not advisable in connection therewith, let the results of the state associations be circulated by the proper organ for disseminating the recorded intelligence collected by these associations of the chiefs of medical science.—Such a plan adopted could not fail to organize speedily the whole land into one beautiful, complete, and profitable system, whose operations for the good of humanity would be incalculable.—Zeal would be awakened in every direction, and every state supplied with “an able and faithful medical faculty;” and the real interest the public “have in the qualifications and character of medical men” promptly secured.

The beginning point would be the establishment of associations in every state and territory. This done, a periodical channel of communication to every individual possessing one spark of professional zeal would at once spring into existence and be perpetuated; and individual societies would be established in every settlement where half a dozen practitioners could be found. And if journals should be found insufficient for communication between states, let the association be represented in annual convention after each meeting of the state associations.

There is profit derivable from state associations, or national conventions for our profession, which primary, local meetings, as the individual societies would be, cannot afford. There is something in the pride, or self-love of men, amounting to a party-spirit view of self interest in this land of freedom of opinion, which forbids the profession, and even the practitioner, to succumb to the voice of reason and plainest demonstration. It often amounts to a gross want of magnanimity. This self-party-feeling when possessed, blinds one to the loudest voice of reason, and engrosses every care for victory, *even at the expense of true philosophy*. Unteachableness and sordid views of personal fame and fortune are engendered, and each retires to his home or desk of instruction to pursue his own errors with redoubled vigor, as if in proof of the truth he advocated. This could not, at least in any thing like the same degree, reach into state associations. Here the spirit



of enterprise which would impel to the meeting would be founded on the interest derivable from a fair exchange of scientific commodities, the purpose of giving *small* and receiving great gain, exchanging the *solitary* and domestic productions of each individual *alone*, for that of all others collected, at par value.

We have had some experience in demonstration of the truth of these remarks. In our state we have had for nine years a central society which has had annual meetings. It was composed of members of the state board for the time being, and such others as pleased to meet with us. It is true that, there being no county or primary associations, the meetings were never very numerous attended; but the annual sessions generally occupied two or three, and sometimes four or five long December evenings.—There was no envy—no pride—no conflicting interests to serve. Arguments were fair, liberal and respectful; and each seemed anxious to improve, by the opportunity thus afforded, his fund of useful theoretical and practical knowledge. Such was the steady character of these meetings. But not so with the primary society of which I have long had the honor of being a member. Here each too generally espoused to the last, the position he first advanced—deaf alike to reason and absolute fact.

It would seem only necessary to suggest the thought, to give wings to the grand enterprise, which would enable it at once to survey the whole land—metamorphose the present confined, dangerous and disgraceful state of things at once into a system, moving on with the regularity and brilliancy of the solar, and illumining every spot with the lights of true science.

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### Thomsonian Surgery.

It has for some time been our purpose to notice the late repealing act of the Georgia Legislature in favor of Thomsonian practice; but the delay of publication consequent on a change of printers, and the accumulation of matter of more importance to the profession have combined to enforce a procrastination of that duty. We may attend to it on a future occasion.

We are well aware of the fact that, on a former occasion when the Thomsonian memorials were laid before the legislature of

Georgia, praying a repeal of the license law, some of the most enlightened and respectable physicians of the state who were members of the legislature, favored the bill. This was however on account of the supposed necessity of such a course for bringing the citizens to a due estimation of the gross fraud and imposition which that practice exercises on them; saying at the same time that they had not failed to use all other means in their power to save the people therefrom, not only without success, but to no better effect than to draw upon themselves the illiberal charge from those they would preserve, of acting from the impulse of pecuniary views and of a persecuting spirit.

Although we were far, very far from admiring the *humanity* of such a measure, by legislators who had in trust the sacred rights of the citizens, we must in charity, hope and believe that those who were in the last legislature who favored the bill, were actuated by the same motive. We say, "in *charity* we must hope" so, for we cannot hope and believe otherwise without believing that they were actuated by a wrong principle, as we know of no other which is more charitable to the *honest and scientific* physician.

If then, such was the purpose of the more intelligent portion of the legislature, now that the plan is adopted, it is important for humanity that the desired end should not be retarded by the fastidious silence of those who have facts in point.

As it is not less our duty to prevent than to remove evils when produced, we therefore cheerfully insert the following letter from Dr. MILLER, not because the facts contained therein excite in us the sense of novelty or surprise, but because we conceive that those developed in the operations of this *blind, bold, dangerous* imposition, should be laid before the public as speedily as possible: for such facts have power that no logical demonstration can display. We give an instance in proof. Recently, Mr. A\*\*\*\*\* of this place, a journeyman saddler and harness maker of Broad st. who had been a most violent and open advocate of Thomsonianism for some months, and had indeed obtained the epithet of "Doctor" and was daily expected to leave town for practice on the country people, as some of our hatters, gilders, constables, &c. had before done, came to us in great distress. He stated to us that after having so strongly advocated the steamers as he had

done, he felt ashamed to come to us for medical aid, but his necessities compelled him to do so. He stated his case as follows: That on complaining a little of slight colics from bilious habit, he had submitted himself to a steamer's prescription and had taken in systematic order some six or eight prescriptions—principally lobelia, composition tea, No. 6, &c. and that he then found his strength so exhausted, with abundant increase of his disease that he felt that the treatment must, if persisted in, kill him. He then labored under a furred tongue, highly jaundiced skin, with distressing nausea, great feebleness and severe colic pains. He requested to submit himself unreservedly to our prescription, and accordingly received 40 grs. calomel and 5 of aloes, made into 5 pills, of which 1 was to be taken every 3 hours, and effectually carried off within the same 24 hours. Three days after he called to return his thanks for the signal benefit he had derived, declaring himself in as fine health as he had ever been, and utterly astonished at the vast amount of black secretion which had been constantly passing since taking the pills. He remains a thorough convert, and is now greatly ashamed of being charged with ever having advocated the Thomsonian practice. He was the other day called on by one of the Thomsonian clan to subscribe for a Thomsonian journal. His reply was that he “found error enough in the world without reading for it.” On being asked if he had ever tried the practice, he replied that he had to his sorrow; and that it must certainly have taken life had he proceeded further. It was returned that regular practitioners sometimes kill by an injudicious administration. “If then,” said he, “even those who have labored so much for safety and success in practice, are found to kill sometimes by injudicious prescriptions, what better is to be expected of those who have spent no pains in the acquisition of knowledge, but that they must be guilty of a fatal issue, much more frequently?” “But,” said the steamer, “we do for the best, and put our trust in Providence.” “So,” he replied, “do the physicians. This is what any old woman in the country does in all her undertakings with the sick. Pray sir,” continued he, “tell me now if you think you could take this old saddle and repair it as well as I can?” “No, sir,” replied the steamer. “Why, sir?” “Because I have never made it a matter of thorough study.”

The features of Dr. MILLER's case are perfectly familiar to



any one who has taken the trouble to reason one step from the premises. Such an one could only be surprised by a correct distinction of disease, or a correct, or even innocent prescription deduced in any way from such a compilation of deficiency and falsehood as makes up the compound known by the name of "The Thomsonian System."

We speak not only in allusion to the operations of this practice in the hands of the most experienced ; but to its various influences on the common people themselves, who are assured that all regular science is a humbug and that on paying \$10 or 20 they are the best physicians in the world ; the consequences of which are abundant and ruinous, not only to patients, but to operative dupes themselves. I here allude to the inducement offered to weak minds to decline a regular, creditable trade or occupation of any kind which is honest, and whereby they have competence, and sometimes wealth at command ; and which is at any rate, a business quite coextensive with their genius and mental improvements. But this they do, and give themselves up to practice a daring, dangerous speculation on their fellow men, which is to be worked out in darkness, on human life ! Our intercourse with the sick has led us to the knowledge of frequent, and the worst of disasters, from the use of several of the *numbers* as they are called, or Thomsonian medicines. We have known of an instance in one country neighborhood, and of recent date, wherein, by the use of *composition* tea, or of *lobelia*, within three miles distance, and in the short space of five or six months, three excellent wives and mothers were torn from their affectionate husbands and little children ; an industrious and affectionate husband and father from the excellent companion of his bosom, and his numerous and beloved offspring—the young and tender bride but just entered the blooming mead of early connubial bliss—and the tender infant, at once the joy and hope of fondest parents, and but just weaned from maternal nurture, sunk into an untimely grave !

But we hasten to give the account of Thomsonian Surgery contained in Dr. MILLER's letter, and which is from the mouth of the father of the patient, who was himself a steamer.

It should be recollected that surgical errors are external—obvious. Hence it is that they never attempt any thing in that

way; and contend against the propriety of the most important surgery because attention to it would necessarily require some philosophy which they have not at command, and the want of which would be too palpable to keep up the sale of the twenty dollar book. The business of internal administration, and simple medication any way is done under such circumstances as prevent detection by the vulgar eye. The cause of trouble is hidden—the arguments advanced are received as “moonum shinum” latin was by the father from his promising son; and their effects as wonderful as the “presto” of the conjuror, or the “open seceme” of the bandit Hassarac. But although not so obvious;—although the facts of the case have not power to speak so plainly to the vulgar eye, still their common practice is, like their surgery, groundless, reasonless guess-work, as it originates in the same ignorance and error.

*Letter from H. V. M. Miller, M. D.*

CASSVILLE, GA. 20th July, 1837.

The repeal of the law prohibiting the practice of empirics in Georgia was not occasioned I conceive by any change in public opinion in relation to them, but by the consent and by the direct influence of the medical gentlemen throughout the state. They well knew the great advantages which opposition to empiricism in the form of statutes would afford to those who practice it; and believed that the sure and more speedy method of allowing them to sink into the neglect and contempt to which they are destined, would be to place them upon equal ground with physicians, when from a succession of mismanaged cases the community would become convinced of the absurdity of their theory and the destructiveness of their practice. Hence a large proportion of the medical public not only withheld their opposition to, but strongly advocated the repeal of the statute of 1825, so far as it had relation to the Thomsonians (or self-styled Botanists.)

Against the wisdom of these views of the physicians of the state, or their ultimate advantage to the profession, I have nothing to urge. The step has been taken and now we look to its effects regardless of the inhumanity of the policy which dictated it.

But the anticipated end to be answered by the repeal of the law will not be so early accomplished if we allow the account of their murderous doings to spread only from neighbor to neighbor by oral communication, and permit cases, the treatment of which ought to heap unmeasured censure not only upon the individual who manages it, but upon the whole system under

the direction of whose false aphorisms he acts, to produce only a local effect in the section where they may chance to occur.—Let every physician contribute so much at least to the cause of science and humanity as to publish a few of the cases which are constantly occurring and must fall within the observation of every one; and but a short time will elapse before the people by common consent, if not by legal enactments, will free themselves from the curse which is now spreading its blighting influence among them.

There are not many Thomsonians in the portion of the state where my residence is; but I recently met with the subjoined case, which if the editor of the JOURNAL concur in the above views, he can submit to his readers.

In December last, a youth 14 or 15 years old, was riding rapidly through the forest in company with some other boys, when his horse took fright and he was thrown to the ground, from whence he was quickly taken up and removed to the house in a state of insensibility. His father, Mr. A., is himself a *steam doctor*, as the phrase is; but not liking to trust his own skill in this instance, he called in his neighbor the *Reverend Dr. Q.*, who examined his condition, and finding some deformity about the shoulders, pronounced it a dislocation of the *os boachii*—in other words, he had “slipped his shoulder,” and proceeded after his own method to replace it. But after every variety of pulling and twisting which his invention could suggest, had been tried, and the deformity still remained, he came to the conclusion that he had erred in his diagnosis, and it was now unquestionably a fracture of the humerus very high up. Again his surgical knowledge was held in requisition to bandage the limb and place the bone in its proper position; but again he was doomed to experience a failure. Immediately he transferred the fracture from the humerus to the scapula or “shoulder blade,” and treated it as such for a day or two, when he finally came to the conclusion that (I use his own words) “*the bone which joins the arm to the back bone had been knocked out of place*, and he did not know how to get it back again.” So he threw off all his bandages and directed his attention to the general treatment.

There was great pallor of countenance and oppressed breathing soon after the injury; to relieve which, or to “bring him too,” as the Doctor had it, stimulants were administered in large quantities, as No. 6, brandy, &c. In a short time the pulse became full, the face flushed, the patient frequently breaking forth with wild and incoherent expressions. This was regarded as very favorable progress and certain indication of his being “brought to.” But as some days passed without the restoration of reason, the Doctor thought that he ought to take “some more No. 6, some diaphoretic powders and be sweated;” all of which was



done and the same plan persevered in, subjecting the patient to repeated "courses of medicine," as they bombastically term it, for about three months—keeping him all the while under the influence of stimulants and sudorifics, alternately. Throughout all this period, after the boy recovered from the stupor occasioned by the fall, he was a raving maniac, continually singing, halloing, swearing, biting and otherwise injuring those who attended him; sleeping very little, and his eyes wearing a peculiar expression of wildness and terror.

About this time the father of the boy began to entertain doubts of the infallibility of his system—and soon after, a friend upon whom he relied persuaded him that it was necessary his son should be trepaned, to perform which operation I was requested to visit him. I addressed a letter to my friend Dr. MONTGOMERY, to meet me the next day at the patient's house, when we found his condition as above described, and received the foregoing history of his case.

It was at once apparent that the deformity of the shoulder which had so greatly perplexed his *lobelial* attendant, was produced by a luxation downwards of the scapular end of the clavicle. From the present appearance of the patient—from the history of the case and its treatment, which Mr. A., the father of the boy, was able to give us in detail, it was no less evident that his brain had suffered from concussion, and that his present situation was the result of the improper treatment of that injury.

As there had been no fracture of the skull and no symptoms of compression of the brain remained, we had of course no use for the trephine. My residence is near 40 miles from our patient; I therefore left him in the care of Dr. MONTGOMERY, who carried out what we considered the proper treatment to which he should then be subjected, viz. venesection, frequent purging, revulsive enemata, spare diet, shaving and blistering the scalp. In two weeks he was well.

It is needless to say what would have been the termination of the case had he been sufficiently bled and an antiphlogistic treatment adopted immediately upon the supervention of reaction after the receipt of the injury.

In most inflammatory diseases, the injury produced by the use of the Thomsonian remedies would be incalculable, did they not excite a profuse perspiration which in some degree counteracts their stimulant effect, but in the above case, from the situation of the organ effected, this salutary provision of nature could not produce its customary beneficial results.

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## MEDICAL INTELLIGENCE.

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**MEDICAL COLLEGE OF GEORGIA.**—This institution is now settled in its steady course of usefulness, with an increasing class, and every facility which Europe and America could afford for giving interest and usefulness to its ample course of annual instruction. Its Museum and Laboratory are appropriate and ample—its Library, now considerable and containing many of the most valuable and costly foreign works, will soon be greatly enlarged by the addition of an extensive catalogue of works, selected from all parts of the world. Its splendid classical edifice, chastely finished in Grecian Doric, stands on a beautiful plain, retired, yet convenient to the populous part of the city, and is so arranged as to afford convenient accommodations for every important purpose. Its Laboratory and Library Rooms are spacious, and its suite of Lecture Rooms is ample for the accommodation of 250 pupils, and affords the student the comfortable opportunity of changing rooms between each lecture as constantly as the subjects will allow.

Two large rooms are appropriated to the Museum, another to microscopic observations with a Grand Solar, and a Superior Compound Microscope; and another suitably capacious, to the purpose of a preparation room for the lectures on Anatomy and Surgery.

A suitable fire-proof building has been recently erected in the rear of the College edifice for the purpose of Practical Anatomy, whereby this business has been removed from the college building, and complete arrangements made for its being well supplied.

Since the completion of its last course, two additional professorships have been created, and filled by gentlemen of the most approved qualifications.

**MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA.**—The annual announcement of the Trustees and Faculty of this institution for the course of 1837-8 invites attention to the present state of its prospects, and justly urges the advantages of southern over northern and western institutions, to those who are destined to southern practice. After a somewhat minute statement of their preparation, &c. for profitable instruction, they conclude with an analytical view of the course of lectures by each professor.

The Faculty of this rising institution consists of

J. EDWARDS HOLBROOK, M. D., Professor of Anatomy.

JOHN WAGNER, M. D., of Surgery.

S. HENRY DICKSON, M. D., of Inst. and Practice.

JAMES MOULTRIE, M. D., of Physiology.

THOS. G. PRIOLEAU, M. D., of Obstetrics.

C. U. SHEPARD, M. D., of Chemistry.

HENRY R. FROST, M. D., of Materia Medica.

E. GEDDINGS, M. D., of Pathology and Jurisprudence.

Anatomical Demonstrations by F. WURDEMANN, M. D.

E. GEDDINGS, Dean of the Faculty.

**MEDICAL COLLEGE OF LOUISIANA.**—We have received the circular of this institution for the next course of instruction, which informs us that the course of Lec-

tures will commence on the last Monday in November, and close on the last of March, making a course of about four months. The following gentlemen constitute the Faculty:

Dr. STONE, on Surgery.

Dr. BARTON, on Theory and Practice.

Dr. HARMON, on Physiology and Pathology.

Dr. JONES, on Obstetrics and Diseases of Women and Children, and Clinics.

Dr. MACKIE, on Materia Medica and Therapeutics.

Dr. STONE, on Anatomy.

Dr. RIDDELL, on Chemistry and Pharmacy.

The circular is well written, and holds forth to the student great advantages from the location of the school for the attainment of "all that is *practical* in the profession;" particularly in practical anatomy and clinical instruction; and in addition to these, "a position remarkable for its salubrity, during those months to which the lectures are assigned."

Accompanying the circular, is the Introductory of Dr. E. H. BARTON, on acclimation. This lecture contains much wholesome advice on that subject. Dr. B. lays it down as a rule for safe and ready acclimation, to conform to the customs of those who are natives, or who have been acclimated. This is done by lessening the atmospheric temperature, or avoiding exposure to it, and reducing the calorific process. We regret not having room in our present No. for an extensive extract from this lecture, on the subject of Temperance, of which the Dr. proves himself a zealous and able advocate.

MEDICAL DEPARTMENT OF THE TRANSYLVANIA UNIVERSITY.—It appears from various newspapers and other publications on the subject, that about the close of the last course of instruction in this institution, a difficulty arose between the Trustees and Faculty, and between some of the professors themselves, which resulted in the entire dissolution of the Medical Faculty.

On organizing a new Faculty, professors COOK, CALDWELL and YANDELL were excluded; and Drs. DUDLEY, RICHARDSON, MITCHELL, EEBERLE, SHORT and CROSS, were appointed to the six chairs.

Dr. YANDELL's narrative of the dissolution and the causes which led to it is before us. From this we learn that the difficulty arose out of a proposition by the Professor of Anatomy and Surgery to remove the school to Louisville, on account of the impossibility of procuring subjects for practical Anatomy in Lexington; and the growing importance of the former place. In his address to the Chairman and before the Trustees in answer to the 1st charge preferred against him by Dr. DUDLEY, which was for "secretly conspiring and perseveringly urging the removal of the Medical Department from Lexington, &c." Dr. YANDELL holds forth the following language: "He (Dr. D.) has long complained of the ineligibility in many respects, of Lexington as a site for a Medical school. He had habitually declared that its prosperity was safe only so long as its present Faculty should live. It was his loud, oft-repeated and alarming complaint of the impracticability of procuring a sufficient supply of subjects, that caused his colleagues to think of a removal. Sir, he was in the habit of avowing to his colleagues that he was obliged to *discourage dissections*—lest the pupils should discover his scarcity of subjects." And that "so effectually had he '*discouraged dissections*,' that, as testified by his Dissector before the Board, ONLY ONE PUPIL dissected last winter!" &c.



Dr. Y. then proceeds to the proof of his assertions by the evidence of Drs. COOK and SHORT; the examination of the former of whom is given at length in an appendix purporting to be an ample confirmation of Dr. Y's statement; and Dr. Short's, which was verbal, is declared to be not less confirmatory. Much of the documents are the transactions with the Trustees during the investigation; and other parts declared to them with positive evidence or best reference annexed.

We have not seen the statements of the other side on like authority, and will therefore decline locating the blame of this affair,—(a blame certainly of no trivial nature,) on either party.

It is understood that the ex-professors COOK, CALDWELL and YANDELL, are industriously engaged in the purpose of establishing a new school in Louisville.

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*Annual Announcement of Lectures, &c. in Jefferson Medical College, for the Session of 1837-8, &c.*

This annual publication is just received. It contains a very brief, but just allusion to the late and present progressive improvements in the science of medicine, in regard to their bearing on the duties of teachers and colleges. It is true that in the former age, a brief course of collegiate instruction was sufficient to afford a general and somewhat particular view of the state of the science then. But such have been the changes and improvements in latter years, that no course of instruction by any set of men, or under any kind of system, can at present do justice to the science in the short space of three or four months—much less to the pupil, whose mind cannot in that time compass the matter which must now be taught. A great variety and quantity must under such a system, be crowded on the mind of the pupil, beyond what he can comprehend or retain, or even have bodily powers to attend to. It follows therefore that the instruction actually obtained must, either from a want of time to present in a proper manner the many topics which should be thoroughly understood; or the want of powers in the hearers to comprehend and retain the same, or both, be superficial in a very great and unnecessary degree. Hence the very conspicuous necessity constantly observed, for young practitioners to learn most of the important practical details, as well as prove the truth or error of their theory, by observation exercised on their first and best friends.

We take leave, however, in our notice of this production, to correct one *little* error which we observe on the 4th page. Whether this has arisen from the mere circumstance of the remoteness of our situation having prevented the Faculty of Jefferson Medical College from learning the facts appertaining to the Medical College of Georgia, or whether they mean to affect a forgetfulness of a new institution which is just rising into competition with them; or whether from some other cause, we do not pretend to determine; but the following language is found on the page above referred to:

"The same cause—the progressive improvement of medical science—had suggested to the professors to extend their course of instruction from four months—the longest term in other institutions—to five."

Whether the gentlemen of that Faculty have chosen to receive the suggestion from "the progressive improvement of medical science" alone and primarily, or from the evidence of its utility and popularity with the most valuable members of the class, who have experienced the salutary effects of a protracted course in the Medi-

cal College of Georgia, is not a matter of much moment. But we are perfectly familiar with the fact that this institution has, from the first reception of its charter, some seven or eight years ago, to the conclusion of the last season, felt and acted upon the necessity of extending its course of public instruction by lectures to the term of *six months*—viz, from the third Monday in October to the third Monday in April. This was done from the indispensable demand for that length of time for doing justice to their subjects, and meeting the capacities of students generally; and some of the Faculty have, in consideration of the actual benefit to students, and the absolute demands of science, desired and strenuously contended for its extension to ten or eleven months. It is also a fact of notoriety that the pupils from this southern institution, who were thoroughly informed on the subject of the term of the lectures here, have annually visited both the schools at Philadelphia. Nor did it fail to be predicted that the northern institutions, although they refused to form the convention requested by this college for the purpose of more effectually regulating the study of medicine, would soon find themselves compelled to extend their course; not only by the reasons which impelled to it here, but also for the purpose of continuing successful competition with the south. As it has been the custom of the Medical College of Georgia to continue its course heretofore, for the term of six months, and is now continuing the same, with only a reduction of a few days, it is an error in *fact* that *four months* is "the longest term in *other* institutions."

There is another feature in this annual announcement which we would examine for a moment before dismissing the subject. It is contained in the following extract—continuing the quotation from the same page:

"With this view, (of the progressive improvement of medical science,) lectures have been delivered during the month of October for the last three sessions, &c.—There are *interesting and valuable topics appertaining to each chair, which cannot be fully discussed in the course of four months*, but may be readily examined during the additional period. The professors wish it however, distinctly understood that the *regular course of lectures will commence, as usual, on the first Monday in November, and terminate on the last day of February.*"

This is, to be sure, somewhat better expressed than on a former occasion when, if our memory serve us, the Jefferson College advertised to commence lecturing on the first of October, for the satisfaction of those who might desire a longer course than four months; but assuring the public that those who did not prefer attending until November, would lose nothing by so doing. This was to us, at the time, a perfect paradox. But in its present form it reminds us of those regularly instructed practitioners of medicine who have taken what is called "a *steamer's patent*," which is nothing more nor less than the act of paying twenty dollars for Samuel Thomson's Narrative and Guide; then give notice that they will practice on either plan, according to the desire of the patient. Now this appears to be a very plain case to any understanding. If regular medicine be a rational science, founded on the impregnable basis of the truths of induction, then Thomsonianism which, like homœopathy, puts induction at defiance, is its antipode; and, founded on falsehood in the very face and under the frowns of all induction, cannot be used in justice to honesty and humanity. But, on the other hand, if Thomsonianism be correct, (and if it be, we bid adieu to inductive reasoning forever.) then it should not be foregone at the option of the patient who has no judgement to decide. If Thomsonianism be correct, its opposite, or the inductive science must be the very extreme of error, and consequently inadmissible in practice. But there are in every neighborhood those who believe *one* correct, and others who believe the other only is; and still for the

money of all, all shall be served out according to *their choice*:—holding out at the same time, to each, the distinct idea of his own correctness, whilst the two opinions must in the very nature of things, be extreme opposites as truth and falsehood.—Such practitioners “run with the hare, and cry with the hounds.” But to the case before us.

If the lectures of the month of October be, as they are said to be, “on interesting and valuable topics appertaining to each chair,” they should never be omitted by any student, because they are essential to the course of instruction: nor would it be good faith to them to offer or afford them facilities for so doing. But if they do not belong to the “regular course,” (and every thing belonging to a regular course should, as far as practicable, be in it,) they should not be offered as “interesting and valuable topics appertaining to each chair.” But there are many students who understand the merits of the six months course and are perfectly familiar with the fact that it is immensely more valuable than any four months course can possibly be; and these two are the most studious and valuable part of the class; with whom the protracted course is extremely popular. There are others also in every class who, looking at the end in view, and not at the means of attaining it, desire to arrive at the *diploma point* by any possible means, and especially the shortest route, and least study—sacrifice what else they may. If therefore, one of the two plans will not serve some individuals, the other will: and whilst the October lectures are recommended to the one as being on “interesting and valuable topics appertaining to each chair,” another is assured that if he omit them he will still have a “regular course,” and consequently one calculated to meet all his demands; or that he will have lost nothing by so doing. This is well calculated to suit all classes, orders, genera and species, it is still a paradox. Now we have no doubt but that the lectures which occupy the month of October in that institution, are indeed interesting and valuable as said to be. The difficulty is to know how, when they are so, they may be about as well omitted as heard, if it be not merely the working of a plan to endeavor to please the fancy of those students who *will*, and those who *will not* study.



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## PART I.

### ORIGINAL COMMUNICATIONS.

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#### ARTICLE I.

*Case of Anomalous Hemorrhage and Spasms. By Hon.  
CHARLES E. HAYNES, M. D., of Sparta, Geo.*

THE peculiarities of the following case, and the apparent benefit derived from two remedies not in very general use, (Extract. Hyosciam. and Extract. Belladonna,) have induced me to place a brief report of it at your disposal—to be published or not, at your discretion.

Miss S. G. is now just seventeen years old; the child of a farmer in moderate circumstances; her constitution has been formed by plain living and active exercise. She is of middle stature, moderately muscular, without the round and perfect finish which gives grace and beauty to the female form; complexion brown and eyes dark. She began to menstruate early in the year 1834, then in the fourteenth year of her age, and after two periodical returns, was attacked with spontaneous bleeding from the inside of the metacarpal joint of the right thumb. The bleeding continued about twenty to twenty-four hours, when it was finally stopped by a compress and did not return. Her mother re-

presents that several quarts of blood were discharged, and that the blood flowed in a stream like that issuing from a vein when opened by the lancet.

But a short time elapsed before spontaneous bleeding commenced from the middle of the forehead and continued at short intervals for about three months.

It is represented by the family that the whole quantity discharged could not have been less than four or five gallons. While the bleeding continued, the lips of the orifice projected, perhaps the fourth of an inch, of the color of blood, until the discharge was suppressed by a compress. Since that time, no further spontaneous hemorrhage has supervened. Not the least remarkable circumstance is, that the catamenia returned with ordinary regularity and quantity during the whole period of spontaneous bleeding.

About last February, shortly before the menstrual period, small red ridges were observed upon her head and arms, which finally burst and left marks in the skin, resembling to the eye and the touch the scratches of briars, or of the claws of a small animal. These have continued to recur in connexion with that period, and always preceding it, until about the 24th of last month, when they made their appearance a few days afterwards, accompanied with violent spasms and excruciating pains of the wrists, knees and ankles. As she had occasionally suffered with spasms, and been relieved by moderate bleeding, anodynes, &c. the family resorted to these remedies, but without effect, and I was called to see her the day after. Here it may be proper to observe, that formerly, whenever the cutaneous affection above mentioned was fully developed, every other troublesome symptom subsided.

When I saw her at 4 p. m. on the 25th of July, I found her laboring under violent and frequently recurring spasms, pain in the joints, and the cutaneous affection imperfectly formed, complaining at the same time of such gastric distress as usually attends a suddenly suppressed eruption. Ordered sinapisms to the stomach and extremities without any visible relief. During that night and the next forenoon administered opium in almost every form, Aqua ammon. Tinct. foetid, without any permanent alleviation—the large quantity of paragoric, laudanum, black drop, Dover's powder, &c. procured four or five hours quiet

sleep in the course of the night, which was followed with pain and spasm as excruciating as ever. On the morning of the 26th, apprehending the existence of spinal irritation, applied an epispastic ten inches long, which drew well towards the evening.—About 11 o'clock, a. m. took about twenty-four ounces of blood, which was sizzly without any apparent benefit. Late in the afternoon, I left her with directions that I should hear from her the next morning. No message was received until the 28th, when I was informed that she was no better.

I then prescribed extract. hyosciam. in doses of two grains and a half to be repeated every six hours, and an ointment made of two drachms of extract. belladon. and an ordinary tea-cup full of lard. I did not see, or hear directly from her until yesterday, when I called at her father's and was informed that *the spasms ceased very soon after the first dose of hyosciamus was administered*, but that two others were given as directed, and no more. Although the spasms were relieved, she suffered severe pain in one of the knees which was immediately removed by a single application of the belladonna ointment.

She is now in ordinary health, but somewhat paler than usual. The cutaneous affection has not returned. Not doubting that her anomalous symptoms were connected with the state of the uterine system, have placed her upon moderate doses of tinct. aloë cum myrrh. and camphor.

Singular as her case has been, I should have forbore to state it to you, had it not been for the effect of the hyosciamus and belladonna. A single case does not furnish sufficient ground for safe philosophical induction, but I offer the facts for what they are worth.



## ARTICLE II.

*Surgical Cases.* By PAUL F. EVE, M. D., *Professor of Surgery in the Medical College of Georgia.*

## SERIES No. 3.

CASE 1st. *Stangulated Hernia—Reduction by Taxis after 11 hours duration.*—The 26th of February, 1836, I was requested to see ADAM, a negro man belonging to Mr. Samuel Clarke of this city, who had been ruptured many years. The hernia was a reducible bubonocoele of the right side, and for which a common truss had been worn. About 1 o'clock in the day, the patient first experienced pain, and an inability to return the protruded intestine. It was 6 in the evening when I saw him, and after several unsuccessful efforts to reduce the hernia by taxis, I directed the part to be kept wet with sulphuric ether and a current of air to be applied with a pair of bellows. I returned at 8, renewed the attempts at reduction with no better success, and left the patient at 9. It should have been remarked, he was of intemperate habits, and that there was no constitutional excitement, or so little as not to require the use of general means for its reduction. I was again sent for near 11 at night, and failing to reduce the intestine a third time, desired counsel and assistance. Dr. DUGAS was called in; his efforts were also ineffectual, and before resorting to other measures, he requested me once more to try taxis, observing that LISFRANC believed that there were few cases of hernia that would not yield to it when properly applied and long continued. By gradual and increasing pressure upon the tumour with the fingers and hand in the direction of the inguinal canal, I had the satisfaction to feel the intestine yielding and finally to slip up with the peculiar gurgling noise into the abdomen, and this too in less than 15 minutes by the watch.

REMARKS.—Here is a case, offering it is true, nothing very peculiar, but happily illustrating the importance of *perseverance* in the application of our means for relieving diseases. Taxis, the first, the most simple and most important agent for the reduction of hernia, had been employed in this case, and I really thought to its fullest extent, at least I know, until the fingers and

hand were benumbed. But appealing to the watch, we were surprised to find how soon we became fatigued by the operation, and thereby deceived as to the true length of time it was continued. It is certain if taxis had been protracted a few minutes longer when first applied in this case, it would have proved successful. A little more *perseverance* then, would have saved time and suffering; and without it, the patient would in all probability have been subjected to a painful and hazardous operation with the knife. Do we always derive the full benefit from remedial agents, that can be obtained by a judicious perseverance in practice? Or are we not apt to become fatigued, and to cease our efforts before carrying them to the proper extent? We are pleased to contribute even one fact in support of the spirit of the age, which is, "whatever thy hand findeth to do, do it with thy might." What may we not promise for medicine and surgery by industry and perseverance?

CASE 2d. *Peritonitis and Cystitis following an extensive injury to the hypogastric region—Death on the fourth day.*—JUMBA, an aged negro, then belonging to Judge W. W. Holt of this city, while engaged in pulling down an old house, was thrown upon his back by a piece of timber striking him across the lower part of the abdomen. This occurred on the 28th of February, 1837; and Dr. CUNNINGHAM was first called to see him. The patient had eaten his dinner about an hour before the accident; and about an hour after it he complained of pain in his back, and was unable to walk. There was no want of sensibility in the skin of the lower extremities; his feet were cold and pulse rather weak. A dose of castor oil was ordered, he vomited however, before taking it and had two dejections. On the next morning, March 1st, the pulse was still very feeble, the patient had violent pain in the back, and the lower extremities were cold. More opening medicine was given, which operated well, and the loins and extremities were rubbed with a stimulating liniment. At night he complained of strangury and had hematuria—by the use of the catheter a little bloody urine was drawn off.

The next day, March 2d, I saw him with Dr. C. at 3, p. m.—The patient was in a half bent posture, and complained of great suffering in the hypogastric region. As he had passed no urine

for several hours and percussion strengthened our suspicions that the bladder was distended, a catheter was introduced with great difficulty, but no water flowed through it. Suction was applied to its external extremity, still no urine was discharged—we then tried to inject warm water into the bladder, but could not succeed in throwing in more than half an ounce. The bladder was examined per anum, but no distention remarked. We agreed to give the patient an anodyne, and to make him as comfortable as possible—believing his death inevitable. He died the next day at noon.

*Examination 3 hours after death.*—The muscles of the abdomen and left thigh were very much contused and infiltrated with blood and serum. The peritoneum was extensively inflamed, and in the pelvic region of a violet colour. The bladder presented the same colour throughout its coats, which were thickened and contracted to the size of a walnut. There was sufficient effusion into the peritoneum and infiltration in the tissues of the soft parts, to account for the deceptive sound of percussion.

REMARK.—We see by this case, that even the physical sign of a distended bladder, the *dull* sound emitted by percussion over the hypogastric region, (so often relied upon almost exclusively,) may lead to error in diagnosis.

CASE 3d. *Death in ten minutes from a blow of the fist.*—At 8 o'clock in the evening of the — of May, 1837, I was requested with Dr. DUGAS to examine the body of a man who had been killed a few moments before. The evidence at the Coroner's inquest was, that the deceased, BURKE, and another Irishman, while drinking in a grog-shop, began sparring, and he received a blow just below the left ear, which knocked him down. A vein in each arm was immediately opened by a by-stander, but no blood flowed; and in about ten minutes after he fell on the floor and expired.

*Examination an hour after death.*—A slight bruise was barely perceptible under the left ear. No dislocation of the cervical vertebræ—no external wound on head—but extensive effusion of blood on and in the brain, more particularly at its base on the left side, but reaching also to, and filling the lateral ventricles.

*Report of Coroner's Jury.*—"That the deceased came to his



death by a blow inflicted directly below the left ear, which ruptured a blood vessel in the head."

CASE 4th. *Laceration of the Liver from the kick of a horse—Death in less than 24 hours.*—We are indebted to Dr. CUNNINGHAM for the particulars of this case, in whose practice it occurred; and by whose request the post mortem examination was made.

WM. MADDOX, aged 25 years, of short stature and of intemperate habits, while engaged in his vocation, as ostler, received the kick of a horse in the left hypochondriac region, on the afternoon of the 1st of May, — 1837. He vomited soon after the accident, chiefly the dinner he had taken. Dr. C. saw him three hours after it, and found him in great agony, with cramps and spasmodic actions in the abdominal region, his pulse rather weak, and upon examination no external appearance of injury could be perceived. The patient directed the Doctor's attention to a hernia of the right side of some years standing, but which could be even now easily reduced. He was ordered a drachm of laudanum and an enema of salt and warm water. These were repeated several times, the laudanum being invariably rejected by emesis, and the enemata returning without fecal matter. Half a grain sulph. morphine, and a mustard plaster quieting him, he was left for the night. The next morning at 6 o'clock, he was still suffering, though he had not vomited for some hours. The pulse was very weak, and the abdomen quite tense. He took a dose of castor oil, but did not retain it many minutes. At 9, he was suffering much from cramp and spasm—took 31 laudanum and applied 2 dozen leeches to the epigastrium. At noon, as the leeches had not bitten, he was cupped over the abdomen in four places, but not an ounce of blood could be obtained. Two drachms of tr. croton oil were now given, and at 4, p. m. a large quantity of salt and water was thrown up the rectum to encourage evacuation. These afforded no relief—he had no discharge of fecal matter from the bowels. Slight delirium now supervened, the breathing became short, the pulse ceased at the wrist, the head and neck were bathed in perspiration, a livid colour was observed about the anus, and the patient died about 5 o'clock—twenty-three and a half hours after receiving the kick.

*Examination 19 hours after death.*—There was considerable lividity about the head, neck, chest and back. The abdomen was very tense—signs of the scarificator and of the mustard plaster were the only remarkable appearances upon its surface.—We could not define the print of the horse shoe or foot. Crepitation was felt over the whole abdominal region, and the scrotum of the right side was greatly distended with gas. Upon opening the abdomen a large quantity of thin grumous blood rapidly flowed out, and I mentioned my suspicions that the liver was lacerated.

The quantity of blood effused into this cavity must have been near a gallon. In pursuing the examination, a rent in the middle of the left lobe of the liver was discovered. It extended from the anterior edge into the substance of that gland for about three inches on its convex, and near four on its concave surface.—There were also two or three small fissures on its concave surface distinct from the extensive laceration. The hernial sac contained nothing but gas—portions of the intestines were highly inflamed.

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#### ARTICLE III.

*Observations on Nepeta Cataria, by M. ANTONY, M. D.*

*Nep*—*Catnep*—*Catmint*—*Menthæ Felina, seu Cataria. Cl. Didynamia*—*Ord. Gymnospermia. Gen. Nepeta. Sp. Nepeta Cataria.*

This plant is a native of most parts of America, as well as Europe, and is not confined to chalky or gravelly soil, as has been said, but flourishes well in almost any situation; but affords a stronger aroma (in which probably its virtue resides,) in dry, gravelly and chalky situations. It is well known to the common people throughout the United States by the familiar name Catnip, by its peculiar fragrance, by the attraction it has for cats, which attack, eat, and otherwise destroy it; and also as a com-

mon domestic herb used in the complaints of females and infants. It is brought to the southern states in compact cakes of the leaves, and sometimes of the leaves and flowers, as preserved by the shakers; many parcels of which have lost alike their peculiar odour and virtue; whilst others retain a valuable power. Whether this difference is attributable to its age, the time of gathering it, or its being packed whilst too moist, or some other cause, is not determined. But the fresh herb, which is from a perennial root, may be had in almost any neighborhood, if protected from cats, or where they do not generally abound. In the country, in old fields, along roadsides and fences it is found in large quantities. It grows in bunches or clusters of bunches, and is often passed for hoarhound, which it very much resembles, when seen at a little distance. It blooms in the southern states in July and August, and should be gathered when in full bloom—the leaves and the flowers stripped from the stalk, and carefully dried in the shade. It should be kept closely packed in a jar or a drawer and in a cool place.

My observation on its medical virtue assures me that the catnep is entitled to much more consideration than has been bestowed on it by the profession. It is an article in almost universal use in amenorrhœa, and dysmenorrhœa; and as an anodyne antispasmodic in the diseases of infants and children generally. Its nervine power is very decided and appears to consist in a purely anodyne operation of the paretic or hypnotic kind, without the deleterious stimulating effects of opiate narcotics. It assuages pain as other anodynes, and in increased doses, procures profound and delightful sleep, from which the patient awakes refreshed, instead of exhausted as from narcotic powers which stupify by their excitement.

It is used in the form of weak infusion, with infants from birth, onward, as a light carminative aromatic with which they are freely fed by the teaspoon. But when the tea is made stronger, either from a better preparation of the herb, or a larger proportion in the infusion, it procures sleep of a profoundness and duration in proportion to the medicinal power taken, with as much certainty as opium. It is not, however, an apoplectic sleep, even from large quantities; but is complete, easy, and with an apparently entire suspension of volition: and although it may last for



many hours, or one or two days, its manner is still that of a sleep into which a person of the best health has just fallen. I have often been called to patients from a few days only, to one or two years old, on account of the alarm of friends from a continued sleep and entire suspension of voluntary power from this cause. The sleep is often so profound that the patient cannot be aroused to capability of sucking; or of performing any other voluntary motion until the effect of the anodyne has ceased; and if aroused in any degree, the instant the awakening means are suspended, the sleep returns with all its completeness of character.

I have seen an infant only two weeks old, on being fed with strong catnep infusion at five o'clock in the morning, for the relief of gripings which had troubled it through the night, sleep from a few minutes after taking the portion, until nine o'clock of the following day—a period of 29 hours. The alarm of the mother, in consequence of not being able to get the infant to nurse, or to arouse it from its sleep at all, caused me to be called to it when it had slept 15 hours. The mother had given the child seven drops of Bateman's drops at bed-time the previous night with the effect of composing it for about 3 hours, after which it became wakeful and afforded manifest symptoms of griping distress until the catnep was given. By the profound sleep the mother was induced to think the dose of Bateman's drops had resumed its narcotic operation to a great and dangerous extent, and for which she wished a remedy. Knowing that the catnep is commonly in domestic use, and believing the sleep was of that character, I enquired if any had been given, and was informed that the servant had been directed to prepare some in the morning, of which the infant had taken freely. On inspecting the tea I found it containing an unusually large proportion of the herb, and what had been given was administered at one time. The symptoms of the child did not seem to demand any prescription, and I made none; but advised that the little patient be allowed to sleep until he awoke, which was not until 9 o'clock the next morning, when he did so, as after an ordinary sleep, took the breast freely, and remained well.

Another case is present in my mind whilst writing on this subject, in which the child (18 months old) slept about fifty hours; in the latter part of which time however, she had been

often aroused, by the anxiety of the mother, but never so as to exert volition enough to drink or take nourishment. To this child I was called after a sleep of about 30 hours. On finding it to be the catnep sleep, I only recommended the use of a dose of castor oil, and that the child be allowed to rest. She awoke at fifty hours after the dose, with no other trouble following her long sleep than a little apparent exhaustion, which was soon relieved by nourishment which she took with good appetite.

As an herb tea it is a pleasant diaphoretic, for which alone it is often used. But in those varieties of menstrual irregularity which we term dysmenorrhoea, deficient, suppressed and retained menses, it is found fully equal, if not superior as an emmenagogue power to pennyroyal and savin, articles also in extensive use in such cases. And in its entire adaptation to the case, especially of dysmenorrhoea, it is peculiar suited by its anodyne powers. For this purpose it is used by females at and a little before the menstrual periods, in the form of a pretty strong infusion, prepared of two or three drachms to the pint of boiling water, and this drank warm and freely.

I have no doubt but that the peculiar and valuable powers of this plant might be retained in a spirit, distilled in the manner of making essences of mint and other fragrant herbs; and in a syrup, the form most desirable, as it would be the more convenient for administering to children, and exempt from the stimulus of alcohol.

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#### ARTICLE III.

*Remarks on the cases of Dr. E. H. MACON. By PAUL F. EVE, M. D. Professor of Surgery in the Medical College of Georgia.*

In the 1st number of the 2nd volume of the Southern Medical and Surgical Journal just received, at the conclusion of an

interesting article from Dr. E. H. MACON, information is requested concerning three important surgical cases. Although much occupied at present, still as these cases may be considered more directly addressed to my attention, I cannot permit them to pass unnoticed; and would therefore, respectfully submit the following brief remarks:—

Case 1st. “A clergyman of Oglethorpe, whilst leading his horse by the foretop, was by a sudden effort of the horse, caused to suffer great pain at the insertion of the deltoid muscle. He has almost entirely lost the use of the limb, being unable to raise it higher than his breast, or move it in any other direction except forward. The limb has been examined by several physicians, none of whom can detect luxation or fracture. All ordinary topical applications have been made in vain.”

From the very few particulars here published relative to this case, it is difficult to arrive at a very satisfactory diagnosis. There is a want of facts concerning it, from which to deduce a clear and rational conclusion. Several important particulars are omitted in stating the case, arising undoubtedly from the brevity with which it has been presented. For instance, it would be necessary to know in what direction the force was applied to the arm; what is now the actual state of the whole limb; has its sensibility been affected by the accident; can the elbow be brought to the side of the body; is there any difference in the upper extremities, in their length, &c.; what is the history, progress, &c. of the case?

But notwithstanding the few particulars given of this case, we will venture in our very concise examination of it, to apply the doctrine of exclusion. In the absence then of more direct and positive evidence to the contrary; 1st, it is not a disease of the nerves of the arm, because the patient can, *at will*, still use it to some, though it be to a very limited extent. 2nd, it cannot be an affection of the muscles, because the limb can be *raised* as high as the breast and *moved* forward—an injury of the deltoid would prevent any elevation of the humerus. 3d, it is not a fracture of the humerus, because of its immobility—it can be moved in only one, or at most but two directions. If the injury in this case be sustained and located in neither the nervous, muscular, nor osseous systems, and we may safely conclude that the tegumentary and vascular, are not concerned in producing the symp-



toms as described, what then must be its true pathology? I am inclined to the opinion that the shoulder joint must be affected. The articulating surfaces, or the os humeri itself may be diseased, but then motion ought in either supposition to be as free in one direction as another. I am therefore brought to the conclusion, that in this case there exists a *dislocation* at the scapulo-humeral articulation. And moreover, I am strengthened in this decision, from the three following circumstances, admitted in the short narration already quoted. 1st, the arm at the time of the accident was extended (leading the horse by the fore-top,) its most favorable position for luxation. 2nd, the pain at the insertion of the deltoid, may have been produced by that muscle having been stretched by the elongation of the limb—and 3rd, the ability to raise the arm as high as the breast, and to move it forward, are the very movements which can be performed, when the dislocation is one of the head of the humerus into the axilla. It may be only a partial luxation—such cases are recorded.

Case 2nd. “Mrs. L\*\*\*\*, in this vicinity, whilst stretching out a hank of cotton yarn, suddenly felt pain about the middle of the humerus. In a few weeks the biceps flexor cubiti became much contracted and still remains so, bending the fore-arm up to the breast. The limb is painful and almost useless. No dislocation or fracture can be detected.”

Similar remarks with respect to the want of particulars, &c., in relating this case, are as applicable to it as to the one already noticed. The fore-arm must have been extended upon the arm, “whilst stretching out the hank;” the “sudden pain felt about the middle of the humerus,” may be referred to the origin of the brachialis internus muscle; the contracted state of the biceps flexor cubiti, and the fixed position of the fore-arm, would induce me to suspect in this case, a dislocation of the ulna and olecranon process backwards upon the humerus. If since the accident it be impossible to flex or extend the fore-arm to its fullest extent, and should there also be an increased thickness observed in the elbow joint in an antero-posterior direction, with a corresponding diminution of its lateral diameter, then the diagnosis would be clear. By a singular coincidence of circumstances, I have seen within the last ten months, no less than four such dislocations as I suspect to exist in this case—the

olecranon process of the ulna removed backwards from the greater sigmoid cavity existing between the condyles of the os humeri. The fourth case was presented yesterday in the person of Mr. J. P. of Barnwell district, who received the injury by wrestling a year ago, and who came to town to submit to an operation for a disease of the eyes.

Case 3d. "In October a negro girl was struck by the falling of a tree in such a manner that her scalp was considerably lacerated and her left shoulder bruised and violently strained. No fracture of clavicle, scapula or humerus, nor dislocation, could be detected after the most careful examination. All topical applications from the use of which benefit might be hoped for, were used to no good effect. Six weeks after, the arm was entirely useless, but moved in any direction without the least pain. The motion of the shoulder joint was free and without crepitus. The paralyzed state of the parts about the joint afforded a free examination of the head of the humerus, which was always in place with the glenoid cavity. The force which injured the shoulder was applied from above."

This case is stated more fully, and we have a greater number of facts from which to make out an opinion. Its diagnosis too, ought to be more clear and satisfactory, and if I have hesitated in expressing an opinion concerning the nature of the injuries sustained in the two cases already referred to, I feel much better prepared to give a decided judgment on the one now under consideration. This girl, from the falling of a tree, received a lacerated wound of the scalp and a severe contusion of the left shoulder. The arm is now entirely useless, the parts about that joint being paralyzed. The case I think a very plain one. The nerves supplying the arm have evidently sustained a lesion from the accident. The only question about it is, what part of these nerves is affected—does the paralysis of the left arm arise from the injury which the head received or from that of the shoulder, for both were struck by the falling tree and that too at the same time. For this state of the arm to have been produced by the blow upon the head, it must necessarily have been on the right side, or in other words the lesion of the brain must exist in the right hemisphere. In this event too, the intellect of the patient ought to have been disturbed, and in all probability, the paralysis would have amounted to hemiplegia. The cranium may have been fractured, its internal table for instance driven in upon the

brain, or the nerves (the axillary plexus,) may have been compressed or injured by some displacement, &c. near the shoulder joint, without its being detected by the attending physician. Be this as it may, we must admit in this case a nervous affection.

I have thus briefly noticed these interesting surgical cases, and I trust, in the spirit with which the information was requested; but whether I have been so fortunate as to point out their true diagnosis from a correct pathological view of them, remains to be determined.

AUGUSTA, September, 1837.

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ARTICLE IV.

*Remarks on Debilitants and Sedatives. By JOSEPH A. EVE,*  
M. D., of Augusta, Ga.

Inasmuch as in nearly every case of disease, in almost every aberration from health, irritation or excessive excitement is present, of higher or lower degree, of greater or smaller extent, involving one or more of the tissues or organs, the most important, the paramount indication in the practice of medicine, is the reduction of excitement, the depression of morbid action. It is therefore of primary importance to know what the means are that cause this depression and the principles on which they act.

The position first advanced by BROWN, that all vital phenomena are called into existence and maintained by stimuli or excitants acting on the excitability of the system, is now, we believe, universally admitted and regarded as the fundamental principle of all sound reasoning and correct theory in medicine. Assuming then that the manifestation of the phenomena of life, or in other words, excitement, is the result of excitants acting on the excitability, we readily perceive that it must always be depressed or diminished by abstracting the excitants or rendering the system less excitable—that is to say, to depress excitement,



the agents employed must act negatively by abstracting or withholding the stimuli that maintain it, or positively by diminishing the susceptibility of the system to be excited. The first we would denominate negative depressants or debilitants, the second positive depressants or sedatives. Besides debilitants and sedatives, there are other means which, though primarily excitant, by an indirect mode of operation conduce to the same end; these are revulsives and local excitants—the former cause a depression or diminution of excitement in one part by increasing it in another of less vitality—the latter, by increasing the action of the secretory organs, lessen the amount of fluids in circulation and thus secondarily produce depletion. We shall not, however, at present consider those indirect methods of reducing excitement, but proceed to institute an inquiry into the nature and mode of operation of direct depressants; these we have already said are divisible into two classes: *negative*, or those which depress excitement by withholding or abstracting stimuli, and *positive*, or those that deprive the system of its excitability and render it less susceptible of the action of excitants.

No therapist whose writings I have seen makes the proper distinction between positive and negative depressants; the term *sedative* is applied indiscriminately to both, or if debilitant be employed, it is in the same comprehensive sense, without regard to any difference between them. But when we examine more attentively the *modus operandi*, and the effects of the two kinds of depressants and consider the different circumstances and states of the system to which they are applicable, it is certainly very important that they should not be thus confounded together under the same head.

Opposed to irritation or super-excitement, there are three states of depression, resulting from very different causes: 1st, direct debility which is produced by the abstraction of stimuli: 2nd, indirect debility, or exhaustion from overaction—a state in which the excitability has been exhausted and will not respond to the impression of stimuli: and 3rd, sedation—depression induced by the action of direct sedatives—a state in which the excitability is diminished or temporarily destroyed. Of these, three varieties of depression, it is the first and third only, that we endeavor to induce artificially, in the treatment of disease; that is, we en-

deavor to reduce excessive excitement and control inordinate action, either by abstracting stimuli or by lessening the excitability—the means employed for the first purpose we designate by the term *debitants*; those used to effect the second we style *sedatives*.

The general indication for the employment of *debitants* or *sedatives* will be determined by the nature of the excitement, whether it depends on redundancy of stimuli or excess of excitability; thus in some cases and stages of inflammatory diseases, we observe the excellent effects of blood-letting and other methods of abstracting stimuli, and in other cases and stages the greater utility of opium and other *sedatives*, and of *revulsives* which are, as already stated, indirect means of producing sedation.

*Debitants* are generally more applicable to the treatment of the first, *sedatives* to that of the latter stage of diseases of excitement; but there are many exceptions to this rule, for the incipience of some cases is characterized by symptoms ordinarily observable only in the concluding periods of similar affections. In the commencement of febrile and inflammatory diseases, the system is usually replete with blood and the other natural *excitants*, *debitants* are therefore indicated—the indication is evidently to reduce excitement, by withholding or abstracting all the *excitants* that have produced it or that may tend to maintain it. There is, however, one physiological fact involved, that should ever be borne in mind in the administration of *Debitants*—which is, that excitability always accumulates in proportion to the privation of stimuli, hence the reaction, often violent, necessarily consequent on the abstraction of blood, of caloric, etc.—the excitement that succeeds the depression caused by all *debitant* means—to this principle is attributable the extreme excitability of the stomach in persons from whom food has been long withheld, rendering perilous the ingestion of the very mildest nourishment—the very great excitability of parts that have been frozen or long exposed to intense degrees of cold and the danger of suddenly admitting to them the ordinary temperature—the excessive sensibility of the eyes to light, after it has long been excluded from them—&c. &c.

When *debitants* are not timely employed, and morbid excite-

ment has been allowed to rage unrestrained, the natural result is indirect debility or exhaustion, a condition in which neither debilitants nor sedatives can be employed to much advantage, and our chief reliance must be placed in the use of revulsives, and those means that are most efficient in equalizing excitement. If on the contrary, debilitants have been freely employed and sedative means entirely neglected, there will most probably ensue a state, in which there is present high excitement with great debility—that is, we will find, although the patient's powers are greatly reduced, and he cannot tolerate farther depletion, still the excitement is excessive, not at all in correspondence with his exhausted energies—the case has assumed a typhoid type.

It is only by the judicious administration of sedatives and revulsives, that we can hope to recover a patient from a state so critical ; it is only by the employment of debilitant and sedative means in proper association or succession, that is by repressing the excitability as well as abstracting stimuli, that it can always be prevented. It is upon this principle, by diminishing excitability, that the preparations of opium wisely prescribed, manifest such wonderful effects in inflammatory diseases, and are with propriety ranked amongst our most valuable resources—it was for this property that opium was so highly esteemed by the sagacious Sydenham and our own illustrious countryman, the venerable Rush—and it was from observing its happy influence in such cases that the late and justly celebrated Armstrong declared that, if the lancet be termed the right hand of practice in inflammatory diseases, opium in combination with calomel should be termed the left, so nearly do they correspond in efficiency and applicability, in the management of such cases, the correctness of which declaration the subsequent experience of the profession has most satisfactorily established. We shall now proceed to treat summarily of

#### DEBILITANTS.

The privation or abatement of the excitants that are essential to the production and maintenance of vital phenomena—viz, aliment solid and fluid, blood, caloric, oxygen, light, electricity and the exercise of the organs, constitutes the class of Debilitants :



under this head therefore, are included abstinence, blood-letting, cold, a deoxygenized atmosphere, exclusion of light, the means of abstracting or diminishing the quantity of electricity in the system or part affected and rest.

*Abstinence*—The suppression or regulation of diet is of all debilitants, indeed of all therapeutic resources, the most important ; it is that by which we are enabled to accomplish most, in our endeavors to remove disease and reinstate the organs in the healthy performance of their functions. Without being in the least degree disposed to undervalue the efficacy of medicine, in which I have the highest confidence, I do not hesitate to say that we may, by the proper management of this mean alone, effect more in the treatment of disease, without medicine, than by the whole *materia medica*, without due attention to diet. Diet must constitute the basis of every remediate plan—the judicious treatment of no case can be commenced, until the quantity and quality of the patient's diet has been determined.

“Aliment (says Professor Jackson,) furnishing the materials of the animal solids, and differing so very greatly in its nature, in its properties, and in its effects over the actions of the economy, offers to the practitioner the most effective means of modifying the condition of the organs. Of all the remedial agents at his command, no other enables him with so much certainty to accomplish extensive and radical changes in the actual state of the organs, as the aliment, directed on a thorough knowledge of its properties, and mode of influencing the organic or nutritive actions. He is enabled through its agency, assisted by the various regulations embraced in regimen and hygiene, to revolutionize completely the whole organism, and to effect deep and lasting mutations in the physical and even moral nature of man. This result he can operate, by having at command the material elements of our composition, derived from external supplies, and withholding, supplying or regulating them according to the existing indications.”

Our design at present is merely to consider the *modus operandi* of abstinence in reducing excitement, with which view it must be examined, with reference to its effects upon the stomach and upon the general system.

The stomach is one of the most highly vital of the organs and enjoys the most numerous sympathetic connexions with the rest ; hence when the stomach is excited or depressed, the whole system participates in the excitement or depression : food is the natu-

ral excitant of the stomach, which in health stimulates it to the performance of its appropriate function—but when irritable or inflamed, food produces morbid excitement; whereas abstinence, on the principle of withholding stimulus, reduces the excitement of the stomach, down to the healthy point when excessive, and when previously normal depresses it below it, which depression is by sympathy extended to the whole system.\* It is thus that much of the beneficial influence of abstinence is probably often displayed, before the system feels the need of fresh supplies of chyle. But when alimentation has been suppressed a sufficient length of time, the blood becomes impoverished—less nutritious and stimulating—if aqueous fluids have been allowed; but if water be withheld during long continued abstinence, the blood becomes morbidly thick and surcharged with effete and noxious elements, in consequence of the expenditure of serum, in cutaneous and pulmonary exhalation, and the consumption of the more bland and nutritious particles in secretion and nutrition; the result of which is a low typhoid fever which always ensues in those from whom aliment has been long withheld.

The plentiful use of diluent drinks is therefore necessary, all the time the patient is subjected to severe abstinence, to supply the absorbents with water, wherewith to dilute the blood which being despoiled to a great degree of its stimulating and nutritious qualities, becomes less excitant to the heart and all the organs through which it passes—the act of nutrition which takes place in the areolar structure of the organs, the parenchymatous circulation and the intimate molecular movements in all the tissues, are reduced in energy and activity—the consequence of which is a lower grade of organic action generally throughout the system.

It is also necessary to relieve the pain of hunger when present, by mucilaginous drinks and the least stimulating articles of food, for if unappeased, it will not only irritate the stomach but prove a powerful exciter of the brain. Those physicians who push the starving system too far, defeat their object, by subjecting their patient to the stimulus of hunger, until it produces excitement equal to or greater than that intended to be relieved.

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\*<sup>6</sup> *Ventriculo languido omnia languent.*"

The excitement thus produced is somewhat comparable to the reaction that follows blood-letting and the depressing effect of cold ; both result from the accumulation of excitability consequent on the abstraction of stimuli.

During the continuance of acute diseases, digestion is generally suspended, the sensation of hunger is not perceived, and abstinence may be advantageously borne a length of time that would destroy life, in persons previously in good health. The following rule will perhaps be found subject to few, if any, exceptions—whilst the general excitement is above the normal point, abstinence from food, with the free use of diluent drinks, will prove beneficial, as long as the patient is not distressed with hunger. In chronic affections, the same rule will not perhaps so generally apply—in cases attended with much debility, it may be necessary sometimes to administer nourishment, although all sense of hunger may be absent.

The modes of operation of abstinence as a remedial mean may be summed up as follows :

1st. By a direct effect in reducing gastric excitement.

2d. By the sympathetic influence the stomach exercises over the other organs, as the brain, heart, &c.

3rd. By suspending assimilation, thereby reducing and impoverishing the blood, the same effect being produced as by blood-letting, only by a more slow and gradual process.

It would be an agreeable task, did our limits permit, to consider these different modes of operation of abstinence, in its application to the remediate management of various diseases ; but we must hasten to the examination of other debilitant means.

*Bloodletting*—Next to abstinence in importance and extensive applicability as a remedial agent and superior in power, is bloodletting ; of all therapeutic resources it is the most potent ; it is that by which we can effect the greatest immediate, and often the most happy, results ; but its use is at the same time fraught with most danger. Its administration requires the most thorough knowledge of physiology and pathology, and the exercise of the most acute discrimination and profound judgment : when timely and judiciously employed, it is mighty to the subduction of the most terrific and overwhelming violence of disease, and the rescue of life from impending death ; but when practised indiscriminately and



and imprudently, without the guidance of correct principles, it is the weapon of destruction, dangerous as a two-edged sword in a madman's hand. Blood has been very appropriately styled, life's sanguine stream, for it imparts strength and conveys nourishment to every part of the system, and with its flow or ebb life flows or sinks with equal pace—it cannot therefore be safely trifled with, or with impunity wasted.

While the remediate process of abstinence is slow, gradual and safe, the changes wrought by the abstraction of blood are rapid; sometimes the most disorganizing excitement is instantaneously reduced, and perfect ease afforded from intense and excruciating agony—this frequently occurs in peluritis and other acute inflammations, while the blood is flowing from the arm; but by imprudent and excessive deperditions of blood, the powers of life may be irrecoverably depressed, or the consequent re-action become violent and beyond control.

The proper employment of the lancet is one of the most difficult and embarrassing subjects in medicine; for high excitement is not always accompanied with exaltation of power, or compatible with the loss of blood, nor is a depressed state of the vascular system always an evidence of debility, or a counter-indication to the farther abstraction of blood. Our prescribed limits will not allow us to institute an inquiry into all the principles involved in this interesting subject:—our design is simply to make a few cursory remarks on blood-letting as a therapeutic mean, in which respect it must be contemplated, with reference first to its influence over the heart and arteries, and secondly to its effect upon the system in general. Blood is the appropriate stimulus of the heart that excites it to contraction and maintains the circulation; its abstraction consequently, on the principle of withdrawing stimulus, diminishes the force with which it is impelled through the arterial system which is under the immediate influence of the heart; and as every part is pervaded by arteries the effect is therefore felt throughout the whole organism, but most conspicuously in those organs that are most abundantly supplied with those vessels and accordingly general bloodletting is most efficient in subduing inflammations of the brain, lungs &c.; whereas when the membranaceous viscera, as the stomach intestines, &c., that abound in capillary vessels, are inflamed, the

same beneficial results do not follow the use of the lancet, and local or capillary bleeding is found most efficacious.

The therapeutic agency of blood-letting is readily comprehended, by contemplating its effects upon the different organs and systems. Its debilitating effect on the circulatory system is evinced by the pulse becoming feebler, softer, smaller and slower until syncope takes place, during which it is nearly or entirely suspended; this state continues until it is relieved by the supervention of reaction—when, for a time, the excitement becomes as high, or higher than before the bleeding.

The brain and nervous system very soon experience the depressing influence of blood-letting—the nervous centres failing to receive a sufficient quantity of blood, the functions they exercise are performed with less energy and activity until they are suspended in syncope. The muscular system being under the immediate influence of the nervous, muscular contractability is very promptly and conspicuously diminished by blood-letting. During the abstraction of blood, the action of the lungs becomes more free and their secretion more abundant, and as it continues to flow the inspirations become more profound and less frequent. The stomach and intestinal canal are greatly affected, either directly from not receiving their accustomed supply of blood, or by sympathy with the heart, brain or lungs—nausea and vomiting are of frequent occurrence and sometimes diarrhea results—hence the propriety of the precept to avoid bleeding directly before or after a meal. The effect of blood-letting on the liver, though not apparent when that organ is in its normal state, is very conspicuously manifested during inflammation, by the speedy cessation of pain, and by the promptness with which its secretion is produced, all though cholagogue medicines had previously been exhibited without effect. The warmth of the surface and of the whole body is reduced. The skin becomes relaxed and covered with copious perspiration; and most of the secretions are for a time promoted. The action of the absorbents is increased—the activity of absorption being always in inverse ratio to the fullness and force of the arterial system. By thus contemplating closely the influence blood-letting exercises over the organs in their normal state, we

will be able to appreciate correctly the beneficial effects to be derived from it in disease.

Blood-letting operates immediately in reducing the excitement of an organ, by lessening the quantity of blood sent to it, and the momentum with which it is impelled into it by the heart—which reduction or depression is in proportion to the amount lost and the suddenness with which it is abstracted.

It has been long remarked that the system is affected more by the sudden abstraction of a small quantity of blood, than by the protracted withdrawal of a much larger amount; this is generally accounted for, on the supposition that time is thus allowed for the vessels to contract and accommodate themselves to the diminished volume of blood; but this appears too mechanical and not in accordance with correct physiological principles—it is much more rationally explicable, on the principle of the accumulation of excitability always consequent on diminution of stimulus. We would explain it thus—when the stimulus of blood is withdrawn slowly, the excitability accumulates so fast, that the excitement is maintained or subsides very slowly and imperfectly, sometimes not until frightful losses of blood have been sustained: whereas, when blood is drawn rapidly, time is not allowed for the excitability to accumulate—the heart, deprived of its accustomed stimulus, contracts feebly and ceases to afford the brain an adequate supply of blood to maintain its functions—hence syncope, which continues until the excitability accumulates and reaction is established, when the excitement, as stated above, becomes as high or higher for a time than before blood-letting was practised—which temporary exaltation of excitement\* inexperienced physicians are liable to regard as an indication to repeat the use of the lancet, which repetition is generally injurious and sometimes fatal. We observe then if blood be abstracted slowly, the proportional increase of excitability maintains the excitement, or at least prevents the debilitating effect from being so fully and promptly evinced, and if

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\*This should be carefully distinguished from the permanent rise and development of the pulse, often observable in congestive diseases during the abstraction of blood—this indicates prompt and copious depletion. An oppressed pulse always becomes fuller and stronger as the blood flows from the vein, but an attentive observer will never mistake this for the excitement consequent on reaction.



drawn rapidly, although debilitation is very speedily produced reaction soon supervenes and causes the excitement to rise as high, or higher than before. The plan by which the best result shall be ensured from the employment of the lancet, the plan by which excitement may be most promptly and effectually reduced, is to abstract blood rapidly, to incipient syncope or until sufficient depression is produced, and then to administer a sedative which shall, by repressing the accumulation of excitability, prevent reaction which, as we have seen, often obviates or greatly retards the good effects of bloodletting.

After the subsidence of reaction, that is, after the accumulated excitability has been expended, the excitement will generally be reduced in proportion to the amount of stimulus lost; for although the amount of fluid abstracted may be soon replenished by external absorption, it is principally with water that serves to dilute and render the blood less stimulating; and even when assimilation is not interrupted, the serous portion is renewed long before the crassamentum is restored—still time is always required for reaction to subside, when bloodletting is practised without the conjoint administration of sedatives, and the depressing effect is much more slowly and imperfectly realized.

Professor DUNGLISON, in his "General Therapeutics," appears to estimate very correctly the importance of combining debilitants and sedatives in reducing excitement, although in his classification he does not make the proper distinction between them.

"The advantage," says Professor D. "attending a union of copious bleeding with sedative doses of opium can thus be readily appreciated. The abstraction of blood reduces the amount of stimulus in the sanguiferous system, whilst the opium keeps down the excitability of the nervous system."

And speaking of bloodletting in irritable habits, he observes: "It is in such irritable habits, that we find the advantage of adopting other sedative agents: it is in such, that a combination of bloodletting, short of producing syncope, with a full sedative dose of opium, is often so serviceable; the bleeding diminishing the exaltation of the vital manifestations, by acting on the nerves through the bloodvessels; and the opium preventing the subsequent developement of the nervous excitability. This, I say, is advantageous in irritable habits; and, in strong individuals, the same plan pushed to a still greater extent, is equally successful and not the less philosophical, when employed for the removal of

internal inflammations. It is the plan, which, as I have before observed, is adopted with so much success, in acute peritonitis; the bleeding being carried so far as to make a decided impression on the system, and the opium administered in a full dose; a sedative influence is thus exerted on the body generally, and on the inflamed tissue in particular, under which the hyperæmia is effectually subdued."

By thus employing debilitants and sedatives together or in immediate succession, by abstracting blood and exhibiting the salts of morphia at the same time, we will be able to depress action and reduce excitement, much more effectually, more promptly and with much less expenditure of vital power and waste of blood, than by the employment of the lancet and other debilitant means alone. But we do not contend that this combination is always necessary or proper—there are cases in which it is not required and others in which it may be counter-indicated; yet the most excellent and happy results may frequently be derived from it. The secondary, but more permanent and important mode, in which bloodletting operates in depressing excitement is ascribable to its effect in diluting the blood, depriving it of its nutritious qualities and reducing its exciting power, in consequence of which the vital phenomena throughout the whole organism are manifested with less energy and activity, a general reduction of excitement and depression of action being affected in all the organs and tissues. The same effect is produced which we spoke of as resulting from abstinence long continued, only in a shorter time and to a greater extent. And to cause this dilution of the blood, the liberal use of diluent drinks is equally requisite to furnish the absorbents with aqueous fluid, when bloodletting is frequently repeated as when abstinence is long enforced.

We have now concluded our remarks on bloodletting, short and imperfect indeed, but it was not our design to treat the subject in all its details which would require volumes, instead of a few pages which was all we proposed.

NOTE.—In a future number we will continue our remarks on debilitants and sedatives.

## ARTICLE VI.

*Case of Retained Menstruation, with anomalous symptoms.*

*By Dr. D. F. BAILEY, of Barnwell District, S. C., in a letter to the Editor.*

*Mr. Editor* :—As your Journal is one of the most useful organs in the Southern states, for the dissemination of medical knowledge, I transmit to you the following interesting case which occurred in our practice a few months ago. We were called to this case on the 10th of May last. It was complicated with a derangement of the uterine system. There was at first no obvious cause, though on inquiry, we learned that it was consequent to a fall, in which the gluteus maximus and latissimus dorsi muscles sustained considerable injury. A bubo, about as large as a common walnut, was discovered in the inguinal region, which in the course of time became so troublesome as to require medical assistance. Dr. TESSER was called in, and believing the statement above related, did nothing else than treat it as an inflammatory swelling of a sympathetic nature.—Having relaxed the tumor, and suspecting from the softness of its feel that pus had formed, he made an incision into it, in a longitudinal direction with the glands, which gave issue to a thick kind of pus mixed with blood, but did not answer the purpose he anticipated. After trying various remedies and meeting with no better success, he abandoned the case as incurable. In the deplorable condition which “a Dr’s. desertion implies,” she was carried to Professor FORD, who examined, but did not do any thing for her, nor report her case. In this condition, she was brought from Georgia to us. She gave us the same statement as to cause and effect, and from the silence of those two preceding gentlemen, we were much perplexed to discover the pathology,\* and apply curative means. On examination, we were from circumstances, induced to believe its origin to have been from a syphilitic taint; but there was one circumstance which militated against this supposition, and that was, how she

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\*The patient was a girl, about 16 years of age, and owned as the property of Mr. Brigham, of Georgia, Burke county.



possibly could have contracted that complaint at the early age of twelve years. This is possible, I admit, but it is rare. The complaint was one of three or four years' standing. Giving full scope to our opinions, as regarded the cause and nature of the complaint, we modified our remedies accordingly; but mercury did not the least good; after continuing its use for an indefinite length of time with no advantage, we altered our prescriptions, substituted more active cathartics with a view to diminish the plethora of her system, as well as to remove gastric impurities; with these we were more successful. Observing that she labored under a suppression of the menses, we combined those medicines with emmenagogues, with greater advantage, and it is here the nature of the disease develops itself. Before the administration of emmenagogues, the secretion from the ulcer in the groin was of a fetid pale colour, adhering to the sides of the wound, and very rosy; but after the system was brought under their influence, the discharge became more copious, more healthy and thinner in consistence; and this was observed in three successive trials. But as soon as they were laid aside and their influence suffered to wear off, the discharge would be greatly diminished in quantity and deteriorated in quality. Hence I ask, may not the menstrual secretion have become absorbed and eliminated through this orifice, which may have become a vicarious passage for it? What manifestly renders this more probable is the phenomena observed in the augmented or diminished discharge of pus, in proportion as the dose of emmenagogues was increased or diminished. 2dly, other medicines, of a different nature, not possessing this specific influence over the discharge: 3dly, there being no evacuation of any kind per vaginam, nor ever having been, until within a short time after the bubo was observed in the groin, when there was a slight show: 4thly, the increasing developement of the mammæ and pelvis, which was still more perceptible at each period. The patient told me that she had noticed some of the circumstances just enumerated for two years, especially the increased size of breast, the augmented quantity of the discharge from the sore at each menstrual period; but stated that the discharge then, differed from that which appeared to be occasioned by the emmenagogues, owing probably to the imperfect state of the secretory process at that time.

She also said, she never suffered any inconvenience from her menstrual periods which were attended with as little trouble as any other period of her life. From the progressive and uniform enlargement of her breasts and pelvis, she incurred the suspicion of being in a state of pregnancy. But on examination, this suspicion was found to be incorrect, besides her breasts had preserved their fulness for three months, varying in size only at the time already mentioned; and it is well known, that after the breasts are distended together with the other symptoms of labor, it will not be long from that period, before a new being is ushered into life. Her breasts have been, and still are much distended, without any of the symptoms of pregnancy. She is remarkably healthy. This sore must, by its long continuance, have become an habitual drain to the system—the menses must have been evacuated by a secretory process, through that source, or they certainly must have presented themselves per vaginum while the system was under the influence of the most powerful emmenagogues. But having very little time to discuss those points, I will proceed to notice some of the peculiarities of the disease. When first brought to us, she was laboring under a severe cold and debility. The ulcer was situated about an inch and a half below the superior spinous process of the ilium, and just over the femoral artery. It was three and a half inches deep(?) 4 inches long, and about 4 inches in circumference; it presented 4 fungus protuberances—one turned anteriorly, another posteriorly, and the 3d and 4th laterally, with indurated margins and of a highly phagedenic character. From those protuberances, there sprung a great number of small papilla or vesicles—containing as it were, a semi-transparent matter, and from these or the subjacent parts, there was continually exuding that ropy irritating matter mentioned in a preceeding place. The first indication in the cure of the local complaint was the removal of those fungi so essential to the cure by the second intention. We therefore resorted to the use of the most powerful caustics, which in the course of a month or such a matter improved the looks of the ulcer and entirely removed all those morbid growths for a while. Believing the ulcer would now heal favorably, we left off their use and endeavored to heal it up as a common sore, but no sooner was the caustic discontinued than they would

spring up with surprising rapidity. These we constantly removed, and believing them to arise from a morbid state of the basis of the ulcer, we had recourse to "tents;" by tents, I mean in this instance, a kind of bongie of a conical shape and with a passage communicating from one extremity to the other. These we introduced daily as low down as the ulcer would admit and through them we poured in the caustic. This had the desired effect of removing them almost completely. We then desisted from their use. Not long after their discontinuance, the patient complained of a severe pain in the hip. This happened in the evening. Next morning she sent for my father, but before his arrival she had drawn from the ulcer a number of gland-like bodies connected together by filaments all of which together were 4 or 5 inches long, round and excavated; the hollow continuing from one end to the other. The patient was much relieved by their expulsion, but the discharge for 3 or 4 days was of a reddish color resembling somewhat the washing of flesh. However she mended very fast, and in 3 or 4 weeks after it came out, she was discharged perfectly cured. It having healed up very favorably and without any ill consequences from the suppression of the discharge, she is now performing her accustomed duties. The most remarkable circumstance in this case, is the suppression of the menses with such little inconvenience to the system, and the healing up of the ulcer being attended with no danger together with the spontaneous discharge of the gland. On examination of the parts of generation, we discovered a laceration of the clitoris, together with a displacement of the hymen, and this is all that favors the suspicion of its being syphilitic. The passage from the os externum to the uterus was unobstructed, which proved undoubtedly that the menses must have been evacuated by a secretory process through the orifice in the ulcer.



## PART II.

## REVIEWS AND EXTRACTS.

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*An Examination of Phrenology, in two lectures, delivered to the Students of the Columbia College, District of Columbia, February, 1837. By THOMAS SEWALL, M. D. Professor of Anatomy and Phisiology. Published by request. Washington city; B. Homans printer, 1837.*

This little volume of seventy pages, octavo, comprises two lectures on the subject of Phrenology, a topic which has for many years occupied much of the time and efforts of both the learned and unlearned. Perhaps few individuals labored more zealously in the cause of true science during the last age than did Drs. GALL and SPURZHEIM of Germany for the establishment of the truth of Craniology and Phrenology. Nor should the world be ungrateful to them for the benefits bestowed on the neurological department of anatomical science; for it is a truth beyond controversy, that these determined and persevering investigations have given and preserved an impulse to anatomical research by which more truth has been developed relative to the brain and nervous system and their connexions with the phenomena of animal life, a part of science hitherto far in the rear, than had been previously. Nor has the impetus thus given lost its force even at the present day. We will say more—that we believe it will not be lost until the light of truth which now glimmers in the vista with attractive beauty shall lead on the lovers of physiology to the knowledge of the whole philosophy of the nervous system in all its relations to and connexions with human life. If, without this grand object mainly, or in any degree in view, they shall have contributed *that* to this end, without which, it might never have been accomplished; or if ever, certainly not so soon, GALL and SPURZHEIM will merit the grati-

tude of all future ages. Indeed the anatomical truths which they have established, in connexion with their favorite topic, are contributions to science which can never be forgotten. Here ends the meed of praise we purpose rendering to these indefatigable pursuers of scientific research. But it was not our purpose to review the works or the opinions of Drs. GALL and SPURZHEIM as such, and we therefore turn to the consideration of Dr. SEWALL'S lectures purporting to be an examination of opinions mainly set up, and circulated through the world by them.

Of the hundreds, perhaps thousands of essays and volumes, some of which are ponderous tomes, which have been written on this subject, we are decidedly of opinion that Dr. S. has in the narrow limits of seventy pages, done more for the cause of true science, on the subject of phrenology, than the whole of them together. When we consider the proneness of human beings to error and the intoxicating love of novelty, and the vigor with which they seize whatever appears to them on a superficial view to be a pretty thing ; and then their obstinate pride which forbids retrenchment of opinions and sayings, we can venture to assure Dr. SEWALL, that with the most unequivocal demonstrations of truth—make it if he please, as plain as the axiom that “things which are equal to the same, are equal to one another,” he cannot succeed in changing at once the current of popular opinion which has been established. And now, truth has to war not only against erroneous teachings, the attracting force of novelty and the pride of opinion, but also against a party spirit which is almost wholly arrayed *against* her, which often requires an age in science, as it does in politics to cure. At least time must roll on until some new tack can be found to cling to with one hand, until the hold of the other can be gradually and somewhat unobserved let go. Who ever heard of a disunionist or a consolidationist quitting his ultra position and betaking himself to the medium ground of common sense and prudence, until he found means of riding the hobby of abolition, or of regulating the exchange or some such thing. But party spirit merely is not the end of the gauntlet. Interest, an obstacle scarcely less in the way has to be met and vanquished. The books of writers and the tickets of lecturers, which are yet to be sold, come up with fearful odds, to say nothing of the phre-

nologizing offices, and the fees thereof and the implantation of a spice, if not a pungent sense of self-estimation in what of mind occupies each cranium whose eminences and depressions are subjected to the craniometer or the callipers, or the supposed sapient touch. It is a species of fortune-telling which has currency given to it, not only with the vulgar, but also with the superficially scientific—the skimmers of science, by the virtue of a gloss of science, which covers it as does the plate the base coin. They do not set out with the recollection that “all is not gold that glitters.”

And there is another thing in addition to many others too numerous to be named ; which is, that it has become introduced into the parlour ; and here, in the dearth of science of all kinds, as well as of valuable sentiment, which is but too common in most circles at the present time, it is too great a convenience at the command of vacant minds, for the entertainment of the ladies to be readily surrendered. But we presume that the inculcation of truth in all faithfulness to his class was the purpose of Dr. S. and not that of at once changing a world from error to truth.

In his first lecture Dr. SEWALL gives us first a brief but faithful history of the subject, ascribing its origin, however, much to antiquity, instead of the latter half of the last century. As this may not have been made a subject of research by many, we will give his own words :

“Whether he (Dr. GALL) was the originator of the science, or derived his first intimations upon the subject from some previous writers, is a question which I shall not discuss. Certain it is, that ideas, in many respects similar to those of Dr. GALL, were entertained and promulgated long before his time.

Aristotle, the Grecian philosopher, who wrote more than three centuries before the Christian era, considered the brain as a multiplex organ, and assigned to each part its appropriate functions. in the fore-part of the cerebral structure, he places common sense ; the middle portion he assigns to imagination, judgment and reflection ; the back part he makes the great storehouse or seat of the memory.

In the 13th century we are informed that the Archbishop of Ratisbon mapped out the head into regions in conformity with the divisions of Aristotle and others. In the 16th century this



was done more fully than ever before by LUDOVICO DOLCI, a venetian. On this point the Dr. refers also to a work of JO. BAPTISTÆ PORTÆ, published in 1586, and which is now in the library of Harvard College, "containing so many of the principles and illustrations of the phrenology of the present day, that it may well be questioned whether hints have not been drawn from this source by later writers. He proposes to discover the intellectual and moral character of man, by his physical organization, color," &c.

After coursing down the line of history through centuries and ages, shewing the great doubt of the justness of Dr. GALL's claim to originality in this matter, he comes at length to say :

"Whatever may be the truth with regard to the origin of phrenology, it is through the writings of Dr. GALL, supported by the untiring labours of his pupils and disciples, that the science has been widely spread through the civilized world."

We pass hastily over the remaining part of this lecture, in which Dr. S. gives so faithful and liberal a detail of all that phrenology claims, that we were on reading it, fixed in our opinion that he was going to prove himself an able advocate of the justice of those claims—claims which the advocates of phrenology have the vanity to tell us dignify it into a science so important to the well being of society, that it looks down with compassion on the shallow distinctions, and peurile speculations of LOCKE, HUME, BERKLEY, HARTLEY, REED and STUART ; and that the discoveries of NEWTON himself were comparatively insignificant, &c. Next, the principles on which the doctrines of phrenology rest their claims, are briefly but fully given—then a faithful detailed account of the *propensities*, the *sentiments* and the *intellectual faculties*, which with their thirty-four sub-divisions, or particular organs make up the principal machinery of phrenology—all of which with a view of the craniomater and its application to the head, are beautifully illustrated by a plate introduced as a frontispiece.

*Lecture 2.* Having acquitted himself in the first lecture most generously towards the claims of phrenology, Dr. S. here becomes the able advocate of true science, by proposing to show how far phrenology is reconcilable with the anatomical structure and organization of the brain, the cranium, and other

parts concerned. This he does from two considerations : 1st. "From a belief that the anatomy of the parts concerned is the proper and only standard by which to ascertain its truth. 2d. That the metaphysical arguments on the subject, whilst they have been urged with great power, have too often been evaded, and that the public mind has not been enlightened as to the real merits of phrenology, by the usual methods of investigation—even the lash of ridicule under which it has been left to wither, having done but little in arresting its progress, or exposing its errors." After thus advancing his purpose and the considerations on which this purpose is founded, the doctor begins his assault by removing the rubbish out of the way, that he may fairly seize the metal and try its purity by unerring tests. He notices the extent of the ground phrenologists assume the right of occupying, and the numerous outlets for retreat with which they have provided themselves, in order that they may plausibly *evade* almost any objection to their science which may be advanced upon the common principles of reasoning. The ground of these outlets is fully laid open and the sophistry brought clearly to view. We have not room on the present occasion for a full detail of their just exposure, but cannot deny ourselves the pleasure of presenting one or two.

"If an individual has a large head connected with unusual powers of intellect, the case is brought in proof of phrenology ; but if the manifestations are very feeble, it is said that the great size of the head is attributed to disease, or that the brain is not well organized, or that other circumstances have tended to diminish its power. If a small head is connected with a powerful intellect, it only proves that the brain, though small, is well organized, and acts with uncommon energy, &c." Again.

"There is a celebrated divine now living in Scotland, equally distinguished for his amiable disposition, gigantic power of mind, and great moral influence which he exerts upon the christian world. This individual, it is said, has the organ of destructiveness very largely developed ; and not having any counteracting organ very large, it is contended by those who are acquainted with the fact, that he manifests his inherent disposition to murder, by his mighty efforts to destroy vice, and break down systems of error. In this way he gratifies his propensity to shed blood." Again.

"By a recent examination of the skull of the celebrated infidel VOLTAIRE, it is found that he had the organ of veneration developed to a very extraordinary degree. For him it is urged,

that his veneration for the Deity was so great, his sensibility upon the subject of devotion so exquisite, that he became shocked and disgusted with the irreverence of even the most devoted christians, and that out of pure respect and veneration for the Deity, he attempted to exterminate the christian religion from the earth ! !”

Many such are the miserable subterfuges to which he shews phrenologists are bound to resort in order to sustain their cause. He next proceeds to an examination of the principles of phrenology on the following five grounds :

1. How far phrenology is sustained by the structure and organization of the brain.
2. How far facts justify the opinion that there is an established relation between the volume of the brain and the powers of the mind.
3. How far it is possible to ascertain the volume of the brain in the living subject by measurement or observation.
4. How far it is possible to ascertain the relative degree of development of the different parts of the brain by the examination of the living head.
5. Notice a few facts which have been used in support of phrenology, and conclude with some general remarks.

Under the first of these heads our author gives a brief and accurate view of the anatomy of the brain, noticing in passing, the fact that the weight of the brain, which is generally about three and a half pounds, varies greatly, not only in different heads, but in heads of nearly the same size—that the mammillary eminences and accompanying depressions of the convolutions of the brain do not, in any respect, correspond in size, form or position with the bases of the phrenological organs as mapped out—that the external part is pulpy, the internal fibrous ; and that the brain is more vascular than almost any other part of the body. It is to be remembered that professor SEWALL is at least one of the first anatomists of our country. We will give his conclusions from the enquiry, is phrenology sustained by the structure and organization of the brain ?

“Neither,” says he, “the central (*pulpy*) or fibrous part of the brain reveals, upon dissection, any of those compartments or organs, upon the existence of which the whole fabric of Phrenology is based. No such divisions have been discovered by the eye or the microscope. The most common observation is



sufficient to shew, that there is not the slightest indication of such a structure. Indeed, no phrenologist, after the investigations which have been made upon the subject, from the first dawn of the science to the present time, not even GALL & SPURZHEIM themselves, venture to assert that such divisions of the brain have been discovered." The absurdity of the idea of the organs as described by phrenologists is illustrated by the horizontal membrane, the arrangement of the lateral ventricles, corpus collosum, fornix, and other parts. "The notion, then, of the division of the brain into phrenological organs, is entirely hypothetical, is not sustained by dissections, and is utterly inconsistent with its whole formation."

In the second place, he proceeds to substantiate the fact, that there cannot be any proportion between the volume of the brain and the mental powers. In proof of this position, he gives a tabular summary of Baron CUVIER's investigation on this subject, which shews that several species of monkeys have a considerably greater proportion of brain to the whole body than man: and if his opinions of the proportion of man's brain to the body, which is less than CUVIER's, be correct, and that it is, we apprehend any anatomist will determine most easily, then all the nine species of monkeys tested by CUVIER would be found more intellectual than man, some having one pound of brain for every twenty-two of the body, and none less than one in forty-eight; whilst man's proportion, according to CUVIER is one to thirty, and according to our author one to forty or fifty. Again. The elephant, remarkable for his sagacity, has but one pound of brain to five hundred of body, the carp fish one to five hundred and sixty, and the shark only one to two thousand four hundred and ninety-eight. This tabular view shews that not only four species of monkeys, but three kinds of birds, and the dolphin, exceed man in the proportion of brain, &c. Other proof is drawn from observations on the brain of men, by which the fact is established, the number of large and small brains of men of equal enlargement of intellect are about equal.

3d. Here our author controverts most completely, the possibility of ascertaining the volume of the brain in the living subject, by measurement or observation. In proof of the correctness of his position, Dr. S. presents views of the skulls of different individuals, from one eighth of an inch to that of an inch and a half in thickness, causing a difference in the central

cavity for the volume of contained brain in skulls of the same volume, apart from the contents by measure of the skulls containing, as follows :

BRAIN.

PLATE II.	A thin skull, (though of a sturdy waterman,)	56,22 oz.
"	III. The skull of a delicate female, but double the thickness of the former,	51,72 "
"	IV. Very thick, compact, and well organized,	46,21 "
"	V. Averaging nearly three quarters of an inch,	34,79 "
"	VII. A model from SPURZHEIM'S cabinet,	25,33 "

making a difference in these five skulls, as follows :

Between II and III	of	4,50 oz.
" II " IV	"	10,01 "
" II " V	"	21,43 "
" II " VII	"	31,89 "

making the greatest "difference in the volume of brain contained in two skulls, of the same external dimensions, 31,89 oz., something more than one half." These experiments have been most fairly made, in the presence and with the assistance of "Dr. THOMAS P. JONES, and Prof. WILLIAM RUGGLES, gentlemen whose high scientific character insures the utmost accuracy in the results. Nor were they confined to these, but were "extended to a great variety of Crania," all tending to "show that the external dimensions of the skull furnish no indication of the amount of brain. The following conclusion is then considered inevitable, "that no phrenologist, however experienced, can, by an inspection of the living head, ascertain whether an individual has a skull of one inch, or one eighth of an inch in thickness; nor whether he has 56,22 ounces of brain, in volume, or only 25,33."

The fourth enquiry of our author is, "how far it is practicable to ascertain the degree of developement of the different parts of the brain by measurement, or examination of the living head. He here again reminds us, that phrenology and craniology are *professedly* sufficient to enable the experienced phrenologist, to judge of the natural amount and *general character* of the intellects of individuals from an inspection of their heads. The *amount* of intellect being estimated by the *size* of the head,

while its *character* is determined by the *form*." Here again, 'Anatomy interposes numerous obstacles to the practical phrenologist,' only the more important of which he notices. Of these, the separation of the internal and external tables, forming sinuses is particularly noticed; and his eighth plate is a view of a horizontal section of the skull of an individual, well known to the author, who had often remarked his head as eminently displaying the external developement of the perceptive faculties. "His eye was deeply ensconced under a full projecting brow, and the organs of form, size, weight, color, order, number, individuality and comparison, were uncommonly well developed. His locality was uncommon," and our author would, "upon the principles of Phrenology, have pronounced him a RUBENS in painting, a HUMBOLDT in arrangement, and in form, size, and weight, a WREN, a DOUGLAS, or a SIMPSON;" whilst "his comparison and individuality would have placed him by the side of DEAN SWIFT, and the Earl of CHATHAM; and his locality represented him as quite equal to COLUMBUS, NEWTON, VOLNEY, and Sir WALTER SCOTT. But most unfortunately for phrenology, as well as for the individual, Prof. S. discovers, as he clearly illustrates by the horizontal section of the skull, that "the frontal sinuses extend over the organs of individuality, form, size, weight, color, locality, order, time and comparison," by the separation of the two tables of bone at some parts to the extent of an inch, and the cavity thus formed, so capacious as to measure one and a half fluid ounces. So that instead of cerebral *developements*, it is most evident that there were *depressions*.

Having far transcended the limits which we intended occupying by this article, we regret that we cannot accompany our clear and rational author to the end of the second lecture, which becomes constantly more and more conclusive, and finally settles the matter, by the tests of the stern facts of anatomy, that had the *depressions*, instead of the *eminences* of the cranium, been declared by phrenologists as the evidences of peculiar faculties &c., the science would have been at least not less true than it is at present.

We will conclude this article by a recommendation that all who are desirous of knowing truth and avoiding error on this subject, if they have not time nor talent, nor opportunity for investigating for themselves anatomically; or even if they have,



that they will read professor SEWALL'S two lectures, comprized in seventy octavo pages. For ourselves, we have ever withheld our confidence in the justice of the claims of phrenology, from our conviction of its incompatibility with the stern truths of anatomy. And we are, since reading Dr. SEWALL'S book, more than ever convinced that there is no more difference between a time and a tune bump, than there is between a "wine and a brandy bump"—both being about the same thing in cause, condition and consequence.

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*Royal Academy of Medicine.*

*Session of twenty-third January. Extraction of a tooth during magnetic sleep.* A Medical Journal had mentioned the fact of the extraction of a tooth during a magnetic sleep, in the case of a woman twenty-five years of age, feeble and so impressible that the least cause produced with her palpitation and syncope. M. OUDET, a member of the Academy, and who had been the operator, was interrogated on the fact. M. OUDET said that he had extracted a great molar carious tooth of a woman who appeared in a profound sleep; that the operation had not caused, nor seemed to cause any pain: at least she manifested no external sign of it; and, on awaking, appeared astonished at the question, whether she had suffered, during the extraction of her tooth? thinking she yet had it.

The operator, however, declined drawing any deductions from the fact which he merely stated.

This communication provoked, on the part of a great number of academicians, energetic protestations against animal magnetism.—*Archives Général de Médecine.*

*Session of thirty-first January. Amputation of a breast during the Magnetic Sleep.* M. JULES CLOQUET, whose name had been mentioned at the last session with respect to a woman from whom he had excised a cancerous breast, during the magnetic sleep, repeated to the Academy the same details which had been before submitted to it. In this woman, there existed not only a cancerous mamma, but the axillary glands were found to have become affected. Two incisions, of from nine to ten inches in length were made to circumscribe the tumour, the vessels were ligatured, and the axillary glands extirpated. The operation was long and severe, as great care was necessary to protect the axillary artery from injury. The woman did not utter the least complaint. M. CLOQUET could not observe in the

expression of her features the slightest trace of emotion. When interrogated at different times, she replied that she did not experience any pain. The wound was healing, when in consequence of a ride that had been recommended by the magnetiser, she was seized with a pain in the side, symptomatic of an effusion, and died the twenty-eighth day after the operation. During all this time, the magnetic sleep had been interrupted but once, and was then promptly re-produced, the patient having, during her state of freedom from the magnetic influence, expressed the most intense astonishment at the results of an operation which she had unconsciously undergone. The dressing had been made without her knowledge. The ride had occurred while she was immersed in sleep; and, in fine, it may be said with rigorous truth, that she died while sleeping.—*Ibid.*

*Session of fourteenth February. Animal Magnetism.* M. BERNA communicated to the Academy, that he was prepared to shew the phenomena of animal magnetism to those who might desire to observe them. After some opposition, the Academy decided that a committee should be appointed to witness the experiments of M. BERNA. This committee will be composed of M. M. BOUILLAUD, EMERY, OUDET, ROUX, CLOQUET, and FREDERICK DUBOIS.—*Ibid.*

*Influenza.* M. LAPELLETIER de la Sarthe, occupying a double medical capacity, the one at the central Bureau, and the other at the Hotel Dieu, has had an opportunity of observing a great number of persons affected with influenza; the number amounting in twenty days to one thousand and fifty. Besides the occult cause, the epidemic predisposition, he recognises atmospheric vicissitudes, and particularly cold humidity, among the causes of influenza. The disease, according to him, consists essentially in an inflammation of the bronchial mucous membrane, but there is a nervous element which distinguishes it; it is a spasmodic bronchitis. Influenza may assume different forms, but the same characteristic symptoms may be always easily detected. M. LEPELLETIER does not admit a benign and a malignant influenza. In itself, it is always benign, and when serious accidents occur, it is in consequence of some complication. In two hundred cases, M. LEPELLETIER observed twenty-five complications of pneumonia; two of pleurisy, three of gastro-enteritis, two of acute rheumatism, and two of parotiditis. He has seen a phthisical patient suffocated by the invasion of the spasmodic bronchitis, and die in a state of asphyxia. He has made similar observations in catarrhal old men. Influenza may also be a very serious affection in apoplectic subjects, not only on account of the cerebral congestions which the cough provokes, but also in consequence of the general proscription of blood-letting.

Pneumonia or pleurisy is the complication that is most frequently fatal, especially because venesection does not exert its usually beneficial effects. He has found that the plan of RASORI, who combines emetics in large doses with sanguine evacuations, is the most efficacious. He has also derived advantage in catarrhal old men from the administration of the white oxyde of antimony. M. LEPELLETIER has remarked particularly the capacity to resist the action of emetics. In eighteen patients, two only vomited. M. LOUYER WILLERMAY, also regards influenza as a mild disease, and has derived advantage from the employment of venesection where the pulse was full and developed, and the respiration oppressed. The duration of the disease does not then exceed three days, the blood presents a consistent coagulum and sometimes a buffy coat. M. RECAMIER refers to the epidemic of influenza that occurred in 1803, and which was very fatal. The progress of the disease was then marked by a cutaneous phlegmasia. He regards influenza as a disease of the nature of the eruption fevers, and for this opinion he relies not only upon the coincidence of the cutaneous phlegmasia which characterised the epidemic of 1803, but also upon the totality of the symptoms which he has found to be analogous in both cases. The catarrh of influenza is, in reality, similar to that which occurs in scarlatina; if, in 1837, the cutaneous eruption was not general, erysipelatous redness was frequently observed, and pustules of the lips almost invariably. It is known that even in eruptive fevers, the eruption does not always exist, and that the *nature* of the disease is not thereby changed. Besides, this eruption may be internal, for in 1803 it resided not only in the integuments, but also in the digestive mucous membrane, and the intestinal eruption possessed all the characters of the lesions so well described by ROEDERER and WAGNER. Whenever an epidemic rages severely, it leaves indelible traces behind it. Thus M. RECAMIER observed, that intestinal eruptions were multiplied after the epidemic of 1803. After cholera, are not algid symptoms and those of cyanosis observable? He distinguishes in the phenomena of influenza three principal forms. In the first, the (*inflammatory form*), the individuals affected being generally strong and robust, present a full and resisting pulse, the cephalalgia is intense, the respiration is embarrassed, and a sensation of constriction as if by a bar exists at the base of the chest. In this form, venesection is indispensable. He has repeated it four or five times, and has seen the blood become more coagulable in proportion as the evacuation was renewed, a character different from what is observed in pleurisy or pneumonia, and which seems to be peculiar to influenza. In the second form (*the bilious*) the mouth is bitter, the tongue white,



partly covered with mucosities, the pulse without strength or resistance, and the morbid action transpires in the digestive apparatus. Emetics are here indicated, and their effects are immediate. M. RECAMIER has seen all the symptoms disappear in twentyfour hours after this medication. Purgatives are much less efficacious, which is easily explicable since emetics, besides the evacuations which they occasion excite a diaphoresis, the true crisis of influenza. The third form is called *nervous* by M. RECAMIER, the nervous suffering is extreme, the patient enjoys no sleep, fugitive pains traverse the extremities and the trunk, the pulse is small and depressed, and the agitation considerable. In these cases the lancet is absolutely contra-indicated. In this form, the disease is very serious, and the patients sink before any means can produce reaction. In these cases, the employment of baths has been most successful in his practice. M. PIORRY admits two phases in the epidemic; he has seen the pulmonary phlegmasia extend more and more profoundly, and being confined at first to the first broncheal divisions, it reaches in the end their ultimate ramifications. M. PIORRY has employed, but without success, emetics in large doses, in those cases complicated by pneumonia which he has particularly observed in old men.

The loss of blood, even when practised copiously and at short intervals, was not more successful. M. BOUILLAUD without rejecting the idea of a special epidemic cause, finds in the existing condition of the atmosphere a sufficient explanation for the disease and its propagation. He does not deny that epidemics impress their character upon all the intercurrent diseases; but this opinion, however, has been exaggerated. He has not yet seen a sufficient number of cases to authorize him in pronouncing an opinion upon the nature of the pneumonia which is developed in influenza; but he is in the possession of some facts which tend to prove that venesection repeated after his method must be equally successful in pneumonia attendant upon influenza, and in the more uncomplicated pneumonia. M. BOUILLAUD cites especially the case of a physician of sixty eight years, in whom venesection repeated at short intervals, caused the very rapid disappearance of the mischiefs of a very serious pneumonia. He confesses, however, that since the invasion of the epidemic, more deaths have occurred in his wards, than had taken place in the preceding eight months.—*Archives G n rales de M decine, for Feb. 1837.*

*Spontaneous perforation of the left Ventricle of the heart.* Autopsy by M. MEDICI, professor of physiology in the University of Bologna. A saddler, aged sixty, of a good constitution, robust, and enjoying habitual good health, was admitted April

21, 1830, into the hospital of Bologna, to be treated for hemiplegia of the left side. Energetic contra-stimulating remedies such as copious sanguine depletions, drastic purgatives, alcoholic extract of nux vomica, (from a quarter of a grain to five granis per diem,) antiphlogistic enemata were employed, but with very little advantage; the half of the body remained paralyzed; the entire head turned toward one side, speech embarrassed, &c. Dr. BACCIALLI, who replaced M. MEDICI, seeing the inutility of this medication, employed ammoniacum internally and externally, blisters and moxas between the shoulders, but the patient grew worse and worse. The 31st December, 1831, it was necessary to have recourse to the lancet, and the next day the patient was seized with an intense precordial pain, and upon the ensuing day, he died in a state of general debility without agitation.—Autopsy.—1st. In the cranium, a pound of sanguinolent serosity between the dura mater and the right lobe of the cerebrum; the cerebral vessels were turgescient and full of blood, the pulp of the same lobe very red anteriorly, yellowish, almost diffuent, and without circumvolutions for the extent of half a dollar. 2d. In the thorax, the pericardium was distended like a bladder filled with urine, it was transparent and through its substance a red liquid was discernible; when opened, this liquid was found to be composed of serum and fibrine, mixed together to the quantity of three pounds. The walls of the sac presented no appreciable lesion. In the midst of this fluid was seen the heart, whose volume, structure, figure, and color presented nothing anormal. At its anterior and middle part, however, was observed a spot of a reddish colour, and in the centre of which existed a small hole, through which a probe and afterwards a writing quill were freely passed into the left ventricular cavity by a pretty long passage. This passage was smooth and red. The left ventricle was healthy throughout, with the exception of its inferior part towards the point which presented a red colour, like that of the pomegranate. The other parts of the heart were perfectly healthy. No softening, no ulceration or appreciable lesion, except the perforation.—*Annali Universali di Medicina (Gazette Medicale.)*

After the exposition of the details of these interesting facts, the learned physiologist of Bologna searched for the cause of such a lesion of the heart; but not finding it in the details, nor in the traumatic cause, nor in remollissement, nor in ulceration, he is obliged to declare that in the actual state of our knowledge, the lesion he has described remains unexplained. The coincidence, nevertheless, of the disease of the brain, and the lingering death of the subject, renders the observation worthy of the consideration of the physiologist.—*Gazette Medicale.*

*Animal Magnetism.*

The evidence in favor of animal magnetism accumulates on all hands. Events which have lately transpired in a neighboring city, leave to ridicule no excuse to amuse herself with facts, which reason cannot comprehend. The question is now, not how to change the laws which govern human belief, but to show how these surprising phenomena do not contravene anything heretofore known of the functions of the brain and nervous system;—a necessity the more imperious, since, if the obsolete notions that the soul leaves the body and wanders through the earth, as in the Stygian shades, be revived, as there is reason to fear from the tenor of some articles in the periodical press, it is impossible to foresee what may be the consequences, even in the enlightened age, to the very constitution of civil society.

With the hope of removing the grounds of such an assumption, and, in some degree, of obviating other difficulties connected with this subject, the subjoined observations are offered. Whoever is disposed to examine them attentively, though he may think that a simpler and less abstruse method might be taken to account for the phenomena, will admit, it is believed, both that the conclusion follows directly from the premises, while the premises are the least exceptionable of any that can be adopted.

Supposing the nervous system to be the chief medium of a subtle and elastic fluid, to which it maintains a relation analogous to that which obtains between glass or any transparent medium and light, regulating its vibrations, the white substance serving as a conductor, and the grey and white together serving as an excitor, when stimulated by the blood, all the phenomena of the mind, as external sensations, internal ideas, and volitions, may be as readily conceived to be attended with an undulatory motion in that fluid, as any other state of the brain. This ethereal fluid would then constitute the mind or soul, the brain being in all animals but the material condition necessary for its manifestation. The existence of such a fluid has been rendered almost certain by the experiments of physiologists. But I hope it will not be considered out of place to add here a few considerations, which appear to me new, and strongly confirmatory of the hypothesis.

When we observe the image formed upon the retina by an outward object, we are led to infer that the image, thus painted has some connection with the impression produced on the mind; but the inversion of the image overturns the hypothesis. When we compare the eye of the eagle with the eye of man, in order to discover on what depends the superiority of vision of the first,



we perceive no essential difference, except that its retina consist of a number of folds or lamellæ, giving it a great extent of surface compared with man's. Nor can we imagine a reason for this structure, on the supposition of the image impressed on the retina being the cause of the sensation or perception of the outward object. But when we take into view the wonderful effects produced by the galvanic machine, owing simply to *extent of surface* (supposed to enable it to accumulate a great quantity of fluid,) by supposing a similar fluid to accumulate on the retina, the harmony between the structure and function of the part is evident. One class of philosophers say that the mind is in proportion to the size of the brain; another, that it is in proportion to the number and depth of its convolutions. Both assertions coincide with the opinion that it corresponds with the extent of its superficies.\*

It is an established fact, that the nervous chords of sensation and volition increase in size in proportion to the function they have to perform in different animals, and in different parts of the same animal. The brain, the organ of thought, is larger in man in proportion to the nerves that issue from it, than in any other animal. The optic nerve is the largest in the human body, and has the greatest number of filamentous threads. Man is the most thinking animal, and vision is the highest and most intellectual of the senses. Whatever sense is most acute, its nerve is largest. Where muscular action is strongest, and oftenest called into exercise, there the muscular nerves are largest. Now a small nerve might transmit an idea, sensation, or volition, as well as a large one, for anything that we can see to the contrary; but when we see an electro-magnet increase in power according to the number of wires that are wound around it (fac similes of nervous filaments,) and are told by the natural philosopher that they serve to accumulate the fluid, the adaptation for a similar structure in the nerves, to transmit a similar fluid, is obvious.

Should we infer that this was the true function of the nervous tissue, our inference would be confirmed by the fact, that the powers of the mind, of sensation, and muscular action, are strengthened by being tasked, as the strength of the magnet increases by having weights attached to it. This fluid may also vary in density, as well as quantity; or the number of particles within a given space may increase, as well as the extent of

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\* Some assert that the grey matter is the matrix or generator of the white; others, that it is the seat of the mind; but has not the attachment between the two its analogy in the copper and zinc plate of the galvanic battery; and may not the extent of the superficies be for the purpose of exciting a great amount of fluid?

surface, giving rise to an accumulation of the fluid of the same density ; and if so, the phenomena would correspond with the effects of what is called, in electricity and galvanism, increased intensity and increased quantity. What can be a more striking evidence of the circulation of a fluid, which, if its existence were presumed, would be invisible, than the state of Somnambulism affords ? Here, one set of nerves act with unwonted energy, while another is almost as inert as dead matter.

Believing, from such an accumulation of evidence, that we are justified in assuming this hypothesis as a ground work of reasoning, I would now proceed to show how far it is necessary to presuppose the existence of an analogous fluid without, and will first refer to the following paragraphs from Brewster's work on Optics.

"In the undulatory theory, an exceedingly thin and elastic medium, called ether, is supposed to fill all space, *and to occupy the intervals between the particles of all material bodies.* The ether must be so extremely rare as to present no appreciable resistance to the planetary bodies which move freely through it.

"The particles of this ether are, like those of air, capable of being put into vibrations by the agitation of the particles of matter, so that waves or vibrations can be propagated through it in all directions. Within refracting media it is less elastic than in vacuo, and its elasticity is less in proportion to the refractive power of the body.

"When any vibrations or undulations are propagated through this ether, and reach the nerves of the retina, they excite the sensation of light, in the same manner as the sensation of sound is excited in the nerves of the ear by the undulations of the air.

"Differences of color are supposed to arise from differences in the frequency of the ethereal vibrations. \* \* \* \*

"The theory of undulations has made great progress in modern times, and derives such powerful support from an extensive class of phenomena, that it has been received by many of our most distinguished philosophers."

Every step made in the progress of science tends farther to generalize the laws which regulate the motions and affections of matter. Gravitation, electricity, magnetism, light, heat, chemical attraction, have approximated so far towards unity, that it is easier to say in what they resemble each other, than to point out in what they differ. Laplace demands but a plastic ether to mould the nebulous matter, floating through space, into all the conditions which his Celestial Mechanics require for their application ; while LAMARCK and SIR HUMPHREY DAVY, by a similar agency, people the earth with all the forms of animate and inanimate matter.

The number of undulations of an elastic medium, or of different elastic media impinging on each other, in a given time, increases in proportion to the density of the medium; in the same proportion, the extent of each undulation diminishes. If the undulations of a fluid in immediate contact with the retina, of which 37,640 occur in the space of an inch, and 458,000000,000000, occur in a second of time,\* create the sensation of redness, the density of the undulating fluid without the eye may diminish indefinitely, so long as that within increases in the same ratio, and the same number of undulations be made by the one medium impinging on the other, and consequently the same sensation be excited. What is true of one is true of all other sensations.

Now if we suppose that ethereal fluid, which Newton thought the cause of gravitation, to be identical with that which Huygens thought the cause of light, it must act through opaque as well as transparent bodies; but as its density is less in opaque bodies, or its undulatory power weakened, the reason why it exhibits the phenomena of light in one case, and the phenomena of weight in another, would be, because the number of undulations in a

\*The following table given by Mr. Herschel, contains the principal data of the undulatory theory.

Colors of the Spectrum,	Lengths of an Undulation in parts of an inch in Air.	Number of Undulations in an inch.	Number of undulations in a Second.†
Extreme Red - - -	0.0000266	37640	458,000000,000000
Red - - - - -	0.0000256	39180	477,000000,000000
Intermediate - - -	0.0000246	40720	495,000000,000000
Orange - - - - -	0.0000240	41610	506,000000,000000
Intermediate - - -	0.0000235	42510	517,000000,000000
Yellow - - - - -	0.0000227	44000	535,000000,000000
Intermediate - - -	0.0000219	45600	555,000000,000000
Green - - - - -	0.0000211	47460	577,000000,000000
Intermediate - - -	0.0000203	49320	600,000000,000000
Blue - - - - -	0.0000196	51110	622,000000,000000
Intermediate - - -	0.0000189	52910	644,000000,000000
Indigo - - - - -	0.0000185	54070	658,000000,000000
Intermediate - - -	0.0000181	55240	672,000000,000000
Violet - - - - -	0.0000174	57490	699,000000,000000
Extreme Violet - -	0.0000167	59750	727,000000,000000

"From this table," says Mr. Herschel, "we see that the sensibility of the eye is confined within much narrower limits than that of the ear; the ratio of the extreme vibrations being nearly 1.58 : 1, and therefore less than an octave, and about equal to a minor sixth. That man should be able to measure with certainty such minute portions of space and time, is not a little wonderful; for it may be observed whatever theory of light we adopt, these periods and these spaces have a *real existence*, being in fact deduced by Newton from direct measurements, and involving nothing hypothetical but the names here given them.—*Brewster's Optics*, page 119.

†Taking the velocity of light at 192,000 miles per second.



given time were fewer in the latter, than in the former instance. But admitting a fluid to occupy the interstices between the particles of the retina, or to cover its surface, on which the ether impinges in its vibrations, giving rise to a second series of vibrations on which the sensation immediately depends; if its density be increased (as we believe takes place in somnambulism), the number of vibrations, as we have seen, will be increased in the same ratio, and there is no inconsistency in supposing that the slow undulatory motion of gravitation without, may produce that precise number of vibrations within, which excites the sensation of redness, or any other sensation. Since, then, gravitation extends from Boston to Providence, with a power (like the law of illumination) inversely as the square of 40 miles, when it is asserted that a somnambulist in the latter place has the panorama of our city before her, and can direct her attention to any part she chooses, and describe it minutely, the fact may be explained by combining two theories, which, if not established, are at least regarded as the most plausible in physics and physiology, viz. : that which assigns light and gravitation to the undulations of a fluid pervading all space, and all matter, and that which supposes a similar fluid to circulate in the nervous system of animals. For by the nature of the fluid without, its undulatory power must be diminished, by diminished density, or what has the same effect, by the irregular collocation of the particles of opaque matter, requiring, to produce the phenomena of light that increased density and consequent vibratory power of the fluid within, which all the appearances in the state of somnambulism compel us to believe actually exist. It does violence to no established law, but to our preconceived notions. And it is necessary that either our preconceived notions should give way, or a mass of evidence be rejected, the most positive and authentic in kind, and constantly accumulating in degree.

It should be borne in mind, that animal magnetism is not the only subject that is inexplicable on the common notions of the animal economy. An extensive variety of facts, linked together under the terms of sympathy, of fascination, of antipathy, of irritation and counter-irritation, concerning which there is little or no doubt of their authenticity, point to the nervous system as the source of some unrevealed mode of affection. Nor should hereditary predisposition be overlooked in this connection; nor even the question of embryotic influences, against which the only substantial argument is our own ideas how Nature ought to demean herself in our presence, rather than the careful and humble observation of what she does. These words are but general terms, and, like the term inflammation, are expressive of something that lies deeper. As they are now used, they con-

vey no more real knowledge than do the names of the genera of plants, of their properties. If we could forget these terms, when reasoning about the conditions to which they refer, and imagine the nervous chords to circulate a fluid, for which their structure is as strikingly adapted as the vascular to circulate blood, we could lose nothing of what we already know, and might, *possibly*, learn something additional.

Will the adoption of the electro-galvanic fluid explain these mysteries? To assert that it will, unerringly and immediately, would perhaps have no other effect than to expose one to ridicule. The reasoning on which such an hypothesis must rest, is very complex in its nature. Facts are abundant, but their relations are intricate. Every argument must be grounded not on certainty, but on the greater probability. And at first, it will be next to impossible to make due allowance for disturbing causes; still, an approximation may be made towards estimating its bearing on most, if not all of the functions of the animal economy. The heterogeneous mass of facts, which physiological experiments as well as pathology, have of late years brought to light, can be simplified and reduced to some sort of order, if not actually reconciled, by this view. At present they are a "*caput mortuum*," serving no other purpose than to perplex and disgust the student. Nor is he taught to regard them with a clearer or more favorable eye, by the disputes and not unfrequent recriminations of different professors of the healing art, even in the same college. What can afford greater evidence of the want of a more comprehensive hypothesis as a guide to their researches?

A great deal of ink has been shed to prove the danger of theory getting a-head of fact; but comparatively little, to exhibit the evil of facts getting a-head of theory. And if, by hasty generalization, science sometimes gets along too fast, can she not, from want of it, creep at too slow a rate? Let the speculations about ghosts, hobgoblins, witchcraft, disembodied spirits, and devils at six and sevens, which somnambulism is calculated to revive, if its phenomena cannot be referred to natural laws, answer this question.

I cannot enlarge on these points. At some future time I may advance some reasons, why what is called the manipulatory process of magnetization is neither inconsistent with sound philosophy, nor without its analogy in other sciences. Before closing this communication, I would, however, add, that though what has been said above presupposes the fluid to exist in the nerves only, it is not necessarily confined to that part of the system. It exists in all the solids and fluids of the body, the nervous sustaining to the other tissues some such relation as the prime conductor to bodies around it, or as transparent to opaque bodies in

optics,—a medium for greater density of fluid, and greater freedom of motion,—and the fluid itself may, like the cellular tissue, represent the image of the whole body: and oscillating from within outwards, and from without inwards (obeying in these motions, the laws which in crystals regulate reflection, refraction &c. producing so many interesting phenomena,) may thus be the secondary agent, in the hands of the Creator, of the form of our bodies and bodily organs, as well as of the functions of the mind. On this hypothesis the equilibrium of fluids explains those experiments of Magendie, in which the crura of the cerebrum being cut, the animal moves forwards; the crura of the cerebellum, backwards; and the section of either one of them gives a tendency to a lateral motion. It may serve also to reconcile the views of Bell and Magendie on the one hand, and Bellingeri on the other, in regard to the function of the anterior and posterior of the spinal marrow. It accounts for the curvilinear course of the fibres of the brain, in the mutual action of counter-currents, and for the pons varolii, septum lucidum, fornix, mamillary eminences, the decussation of nerves; assigns a better reason for the ganglion of the posterior chord of the spinal nerves, than any hitherto given; and taking the beautiful curves exhibited in crystals by polarized light as the analogical starting point, it tells why organized beings are rounded in form, instead of angular. In tetanus, palsy, catalepsy, and every variety of nervous disease, it will be found to go far towards explaining what heretofore has been considered inexplicable. Any one, at his leisure, can verify these statements. It is sufficient here to give them without tracing each individual fact to its relation with this hypothesis. But lest it might seem, at first view, that these are mere assertions, made without due examination, I will dwell for a moment on one, which both on account of its intrinsic beauty and because it occurred to the writer as an after-thought, may be considered almost as a crucial experiment of the whole theory.

This fluid, it is supposed, by its undulations to and fro, and by its currents and counter-currents, moving through the particles of organized matter, and exerting an attraction or exciting movement among them, disposes them in the forms of our bodily organs. Now let us imagine, after the optic beds and corpora striata have been formed, two currents passing horizontally from the sides of the brain towards the centre, on the under surface of the corpus collusum; they would meet at the centre, and be deflected perpendicularly downward, in the direction of the septum lucidum. Meeting with a repulsive surface on the optic beds, the fluid would there accumulate for a moment, from the fornix, fringing its edge by its vacillations against a counter-re-



pulling fluid, with the fimbriated bodies, and be impelled as it were, most easily in the direction of its four crura. Passing down its anterior crura, and falling perpendicular upon another part of the fluid more dense, it would by undulating upwards and downwards, make a cupped depression, which would serve as a mould for the mamillary eminences. An idea of this mould one may have by blowing perpendicularly upon the surface of a fluid through a small orifice. In like manner the formation of the pineal gland, the infundibulum, the pons varolii, and the convolutions themselves, may be traced with almost mathematical certainty.

It is usual for the person who advances a hypothesis, to give his name in connection therewith. But as the publishing of my name would add nothing to the weight of the arguments which have been presented, I hope will not prevent their obtaining a hearing. A systematic form will be given to the views which are here but indicated, as soon as time and circumstances will permit. In the meanwhile, at the expense of being regarded as a visionary and enthusiast, I commit them to the candid consideration of the medical public, with a firm conviction that while the *art* of medicine progresses uniformly, but slowly, by a rational empiricism, the science itself will be revolutionized, and re-constructed on the basis of these hitherto disregarded phenomena: nay, more, that they will furnish a key to unlock the inmost recess of the labyrinth of nature, and unfold the richest field for scientific research that the mind of man has ever ventured to explore,—the one which is destined to lead him to a just estimate of his rank in the scale of being, and of his relations to all things around him, and which will enable him to unloose the seals of the last volume of the series of Natural Religion, and read therein that Himself and the Polypus the Crystal and the Lily, the Earth and Chaos, the Stellar Heavens and the Nebulous Mass, are but links in one undivided chain of formation and casuation, of which the different physical sciences are but the names of its integral parts.—*Boston Medical and Surgical Journal.*

## PART III.

## MONTHLY PERISCOPE.

*Nitrate of Silver.*

This article which has been hitherto considered as belonging chiefly to the surgical pharmacopœia has, of late been placed before the public as a therapeutic agent claiming the particular attention of the general practitioner.

Dr. BOUDIN has lately called the attention of the profession to it as an *antiphlogistic* of valuable powers in inflammation generally, and more particularly that of the mucous membranes. He has also adopted its use with decided advantage in an epidemic fever of typhus character with follicular enteritis. Of upwards of fifty patients treated by this medicine, only two died, a success rare indeed. He considers that two important points have been established by post mortem examinations of these two fatal cases, viz. that the medicine did not add any irritation to the inflammatory action of the disease, but had promoted the cicatrization of the ulcers : and that on being administered by injections (which are generally considered as not passing beyond the ilio-cæcal valve,) communicating its grey color to the lower portion of the illium.

The formulæ used by Dr. BOUDIN was 3 or 4 grs. of the crystallized salt dissolved in  $\frac{3}{4}$  vi. of distilled water and administered by injection ; or crystallized nitrate of silver grs. vj. water q. s. dissolve and saturate with gum tragacanth, or starch, and make 24 pills. Dose 1 every half hour.

He considers it a common error to suppose that the action of nitrate of silver is confined to the part with which it is in contact, inasmuch as the same greyish color which was produced, as its proper and ordinary effect in the large intestines with which it was in contact was also observable above the ilio-cæcal valve, in the lower part of the illium.

It is not less our pleasure than it is our duty to state thus the valuable results of Dr. B's. experience with this medicine, as of great importance in a certain kind and stage of action, with which the practitioner occasionally meets, and who has been compelled to trust in the virtues of means far more doubtful.

Nor is it less our duty to object to the *principle* which appears to be claimed for the action of this valuable agent. Dr. Boudin it will be recollected, speaks of and testifies to the remedial powers of nitrate of silver in "*inflammation in general*;" thereby making it truly and decidedly *antiphlogistic*, or capable in small quantities, of weakening the system by diminishing the action of the vital powers. A misnomer in medicine is often productive of consequences over which humanity weeps. We could name some melancholy instances: but we will illustrate by a supposed example.

Had Dr. B. prescribed arsenic under the belief that it was a febrifuge from its having the power of preventing the return of a paroxysm, under circumstances which needed an emetic or a bilious purgative, he would have found his prescription followed by a continuance, or increase of febrile symptoms, or visceral obstruction, or hydropic disposition, or both—thereby proving at the expense of his patient, that he used a tonic when an operative portion was needed.

Not less important is a misnomer in pathology. The existence of idiopathic fever is denied, and a general febrile action called "sympathetic fever," originating in local irritation of the stomach or intestines or both, is advanced as the true pathology of fever. The term *gastritis*, or *enteritis*, or *gastro-enteritis* is therefore given to it—words which mean a phlegmonous inflammation in those parts. These names then as used of late in pathology make up the very language which declares pathological truth. What are the unavoidable consequences of a fair reasoning from the premises thus settled? As surely as any just conclusions can be drawn by fair reasoning, they are, not only the careful and rigid avoidance of every efficient medicine, on account of the apprehension of increasing by its use, the gastric or enteritic inflammation; but a total neglect of the secretions, in the *expectation* that on withholding from the part, irritants of all descriptions, the *inflammation* will



subside. Here, a word, as *gastritis* for instance, which means an inflammation of the stomach—neither more nor less,—characterized by symptoms of “pyrexia, anxiety, heat and pain in the epigastrium, increased when any thing is taken into it, vomiting, hiccup, pulse small and hard, and prostration of strength, &c.” is used to mean an ordinary pyrexia, without any specific characters whatever; and which, when produced, exists for a few hours only, and then intermits so completely that the most powerful stimulants and tonics are comfortably borne in the stomach until the regular period of return arrives;—a character perfectly incompatible with the term *gastritis*. Such is, in few words, the origin, and the sum and substance of *expectantism*: and who can calculate the vast extent of mischief thus effected by the wide-spread and captivating doctrine of *local origin*!

Not less liable is a misnomer in therapeutics to lead to the most injurious prescriptions. We are satisfied of the fact, that the medicine under consideration is not, properly speaking, a sedative, or refrigerant power,—that is to say, it is not one of those very few active powers whose operation is to weaken the actions of the system by diminishing the activity of the vital powers. Most of the antiphlogistic means at the command of the practitioner are the withholding or withdrawing of the active powers. Yet there is good reason to believe in the existence of a few known powers which tend *directly* to the reduction of action, as prussic acid, laurel water, and (perhaps) antimonials &c. But all the phenomena of its operation on the living fibre from its severest cauterization, down to its valuable efficacy in a collyrium, tend to prove that nitrate of silver is uniformly an astringent or styptic power, being in common with others of the same class rendered corrosive when in a concentrated form.

In its prescription, therefore, we should be careful to determine that state of the disease in which we may reasonably expect good effects from *styptic*, and not confound it with that which needs “*antiphlogistic*” operation. These states are extremely different; the latter being the earlier, and the former the latter stage of the same disease, the remedial means must therefore be adapted to each with as distinct decision.

We do not believe in the gastric or enteritic origin of ordinary

pyrexiaë. Nor do we believe in the existence of a genuine gastritis or enteritis at all in ordinary pyrexiaë, *only* as being themselves symptomatic or secondary. We do believe that these inflammations can indeed exist primarily, from various causes, as the impression of cold, worms, chemical and mechanical violence, as from worms, indigestibles, concentrated acids, alcoholic drinks, large doses of acrid, irritating medicines, as nit. potass. &c. &c., and that, these occurring in conjunction with suitable predisposition, may, and do involve the general system in febrile action. But when these do exist, their course is steadily, and often rapidly onward, in the true character of inflammation, until they arrive at some one of the various terminations of that kind of disordered action, *without the least tendency* to intermit or remit, more than a pleuresy or a pneumony uncomplicated with any degree of bilious character; nor are they found, in a large proportion of instances, amenable to the most rigorous antiphlogistic treatment.

Autopsy does, indeed, reveal much valuable truth—truth which should not, must not be disregarded; but its developments require to be *reasoned* on. When we find ulcerations in the mucous membrane of these, they do declare their antecedent or cause, inflammation, to have existed; but if these ulcerations are at the follicles they do declare an inflammation of these follicles, or *follicular* enteritis to have existed. This, then, is peculiar—not in the character of ordinary or genuine gastritis or enteritis, which extends itself with regular continuity to a greater or less extent of surface, and which may, indeed, be said to “radiate” from a beginning point in many instances, and extend over a considerable surface. Who ever saw the intestines of one who died from injuries inflicted on them by worms, but observed a regular and uninterrupted extension of inflammation up and down the canal from each eschar. So it is with enteritis from other causes, as cold or any thing calculated to act on a greater extent of surface. But it is not so with the inflammation which is commonly the result of pyrexiaë. This is follicular and the effect of other derangements of the system. One, then, is comparatively general, whilst the other is local, confined to the glands of the intestines. But both have their

action and their declining or decreasing state of action as distinctly as conjunctivitis ; and who thinks of applying alum curd, or diluted alcohol, or solutions of the vitriols, or of nitrate of silver to this membrane in the early stage of an active inflammation ? Yet if we could be made to believe that cayenne is truly an antiphlogistic or a simple dimulcent, surely we should not hesitate to apply it. But in the subsequent stage, when the vessels are debilitated by the continuance of excessive action, and resolution is succeeding, or even passive congestion remaining, a styptic power, as some of those just named, is found to greatly accelerate the cure. And if ulceration shall have supervened, and remains chronic, from that debility of the part which is consequent to active inflammation, the same kind of power exerted on the part will tend greatly to the lessening of that deposition in the part whereby the ulceration is kept up. Hence, the use of catechu, kino, kreosote, and other astringent powers and hence the ulcers in Dr. B.'s two cases, which terminated fatally, were progressing to cicatrization under the application of nitrate of silver.

Thus it seems evident that the nitrate of silver is not antiphlogistic, but phlogistic in its action, and that, as such, it is only admissible in that state of action which is benefitted by stimulation or styptic operation.

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### *Hahnemannism and Thomsonianism.*

In a late number of this work, we alluded to a recent meeting of the London Medical Society, at which a discussion took place on Dr. UWIN's paper in favor of the "homœopathic doctrines." We now give below, the statements of Drs. URE and ADDISON:

Dr. URE had seen the practice of Hahnemannism in Germany, at the very fountain-head of the "art," and it was not successful even there. The doctrine of "similia similibus curentur" was almost as old as the hills. Theophrastus was its advocate, but it fell into oblivion, and was only *revived* by Hahnemann, whose disciples blazoned abroad their "cures," but kept secret the deaths which occurred in their practice. Prince Frederick of Swartzenburgh, died under the care of HAHNEMANN though the "new light" gentleman said that his highness was



guided to his last home by the allopathists. An old lady also died under this treatment, in whom the globule of medicine was found in a carious tooth, which circumstance was considered to afford a reason for her death, the salvatory medicine not having reached the stomach. He thought that one point in the practice of HAHNEMANN had been overlooked—the rigid enforcement of diet. To many articles he strongly objected. Coffee was one which, in particular, he anathematized, asserting that NAPOLEON and BYRON both fell victims to the use of that beverage.

Dr. ADDISON would not consent to argue on a subject which was so utterly beneath notice, but wished the world to know in what estimation that society held the practice of HAHNEMANN—that its followers were either fit for lunatic asylums, or practised with the most sordid motives. He (Dr. A.) was a very loyal man, and had always been so; but he could not help saying he considered that the profession of this country had been grossly insulted in the highest quarters, by the preference there shown to the employers of this foreign mystery. Did the court ever send for lawyers who dealt out the law in Algebraic fractions, or bishops who preached by the square root? He did not mean to say that the blame was to be ascribed to the royal persons themselves who set this example in medicine; but those who were about them deserved the severest censure, for aiding and abetting Hahnemannism in the palace.—(*Boston Medical and Surgical Journal.*)

Hitherto we have said very little on this subject, 1st, because we had nothing good to say; and 2ndly, because it seemed unnecessary to say any thing bad or indifferent concerning such utopian, not to say absurd *notions*; for we would not dignify such stuff with the name of *doctrines*. But when such men as Dr. UWINS present to the London Medical Society a paper in favor of Homœopathy, and it is made a subject of serious discussion by such men as Drs. URE and ADDISON, it is time to take sides on this subject; for the London society is not without its influence. It is true that in the discussion, Drs. URE and ADDISON gave the subject a good share of justice. But (*en passant*,) by our credulity we are forced to enquire if this Dr. DAVID UWINS is the same Dr. DAVID UWINS who but the other year (1825) published a very sensible “compendium of theoretical and practical medicine; comprising with the symptoms, diagnoses, prognoses and treatment of diseases, a general review of phy-

siology and pathology," &c. &c. If he be, as we are inclined to believe, it may not be forgotten that he then declared that no one could be more sensible of the respective merits of such authors, as GOOD, GREGORY, TEMPLE, and THOMAS, than himself. He then spoke of each in terms of ample justice, saying of Dr. GREGORY'S Elements, "it is impossible to speak with undue praise"—of Dr. TEMPLE'S practice of Physic, it "has too long enjoyed a high reputation to need any encomium from my pen," &c.

The principle claimed by HAHNEMANN is indeed, as Dr. URE very correctly observed, "almost as old as the hills." Traces of it, have, in all times been found amongst practitioners as well as the common people. Our own observation<sup>1</sup> on this subject does not, however, go farther back than the last of the eighteenth century. The medical maxim then, was "the hair of the same dog is good for the bite." So strong, indeed, was the faith of the country people in its truth, that we have known great pains taken to procure the hair of the same dog; and in some instances, the dog was killed when it could not be otherwise obtained. Even at different times in the present century, we have, on being called to wounds from a dog-bite, found them dressed with the hair of the same animal which had inflicted the wound. This has always seemed to us a relic of the days of the seventeenth century, when the wife of Wm. HIBBINS was hung in Rhode Island for a witch.

We have met, in later years with some (otherwise) respectable practitioners, whose fixed principle as far as they found it practicable to carry it out, was "like for like," in all cases; as emetics always for the cure of emesis, cathartics for catharsis bleeding for hæmorrhage, &c. &c. This was very good, "*similia similibus curantur*" stuff, as to the *kind* of remedy.

As to the discovery of the virtue of the *infinitissimal* doses of the medicines this class of practitioners use, we have not the least objection, either on our own behalf, or that of any of our friends to leave the whole of its glory to HAHNEMANN, or any of his followers, now and forever. We can bear no testimony nearer disproving his claim thereto, than the occasional observation in our early days, of *pebble soup*, for the cure of certain

diseases—a preparation, the formula for which was to collect a few white pebbles, wash them very clean, and boil them a certain length of time in pure spring water. The history of medicine, however, affords us some very near approximations to the infinitesimal doses, as in the ancient usage of drinking water out of a human skull for epilepsy—the amulets of yore, as the *abracadabra*, &c. This history affords us another approximation in the practice and principles of some of the ancient physicians, to a belief in the competency of *nature* to do all things necessary; an instance of which by no means inconsiderable, is found as late as the days of STAHL under the name of “*Anima Medica*,” and still later under that of the “*vires naturæ medicatrices*,” and still later in the *Diète absolue* and the “*Médecine Expectante*.” These, however, were the productions of men of science, but they were erratic stars—a kind of monomaniacs. But when the totally illiterate attempt to display literature—when fools attempt science, we may well expect anomalies, prodigies, transcendentials, and lots of as curious things as are contained in the little old book called “*Aristotles Master Piece*,” which, in our early day, we have occasionally seen carefully kept by old country matrons for their instruction in midwifery, and female complaints; and from which, doubtless, Thomson took his knowledge of the “*four elements*.” We were not therefore in the least surprized at the forth-coming of what is called “Thomsonianism” or “*Botanic Medicine*,” and which, had he pored one month over CORDERII, or NEPOS, the author would have called *Contraria Contrariis*. Our surprise in this case was excited by that curiosity in human nature, in obedience to which it must always *try a new thing*; and the more strange and unaccountable, the more sure the trial. That this disposition should have extended so far as to collect fifteen thousand memorialists in one state, and eleven to fifteen in another, to pray the legislatures to legalize such stuff, already the most stupendous, and, at the same time, absurd system of imposition and quackery that ever pervaded the civilized world\*—and that there should be occasionally a man found in the ranks of medical science,

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\* Indeed we are assured by Thompson himself, that what he knew of Midwifery he learned in a few minutes conversation with an old woman.



who should know better, and still is so lost to science, intellect, or honesty as to offer to practice for his employers on either "system." And still more, however, have we been surprised that the Legislature of an enlightened state should legalize the practice of such imposition and manslaughter on the unsuspecting citizens whom it is their duty to protect. But we were utterly astonished at the *man himself*, with his character and opportunities, when HAHNEMANN openly promulgated his "*similia similibus curantur principle and infinitissimal* formulæ. These two "systems," both the productions of the present century and age—one in Europe, and the other in America, we should consider, had we belief that their authors had knowledge of each other's views—the one, a counter-plot of the other. We should, had not humanity so much at stake, feel disposed to put them both together as great curiosities for the present age, and call them *Risibles*. But for humanity, surely we should not care how many thirty-cent books Thomsonians should impose on the foolishly credulous for twenty dollars each;\* for we should be perfectly content that those who are incapable of receiving wit otherwise, and gratuitously, should buy it at any price they please. Bought wit is said to be the best, if not bought at too high a price. But we do hold that the tears wantonly wrung out of weeping humanity are worth too much for such a sacrifice.

But after all, it is said, and with much truth too, that they get a great many patients. This is however, not a strange truth, and the rationale of it is best explained in the brief dialogue between the London physician and quack, which was about as follows:

*Physician.* Pray sir, what is the reason that without any laborious study, or expense for education you are, thus unprepared, enabled to have, as you certainly do, so much more practice than I have? I have expended my patrimony, and the prime of my life in preparation for the correct and useful discharge of my professional duties.

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\* We understand that the book can now be bought for ten dollars. Thus goes down this sinful Babylon; and down—down it will go, until the printer nor even the porter will be paid for his labor.

*Quack.* Why doctor, I'm surprised at you to ask so simple a question : surely you have not reasoned a moment on the subject.

*Physician.* Yes, I have often wondered at the fact, but could never account for it.

*Quack.* Then I am the more surprised, and will make it perfectly plain to you in one minute. We live here, you know, near together, and you are very well acquainted in our neighborhood. Now, sir, pray tell me, what proportion of the heads of families nearest around us do you consider both wise and prudent in determining a choice of medical talent. Do you suppose sir, that more than one in twenty is such?

*Physician.* About that proportion, I should suppose.

*Quack.* Very good, sir, you are about correct; the fact is that for this reason, where one would, by his good sense be able to determine on employing you, twenty would call on me ?

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### *Inula Helenium in Leucorrhoea.*

This article (Elecampain) is spoken favorably of in the *Revue Médicale*, by M. De Lens, in the treatment of Leucorrhoea, as well as in some similar affections. He used it in a decoction of ʒij to ʒiv of the root to four cups of water reduced to three. Of this, the whole was taken a day, in three doses. M. De Lens thinks an infusion may be as efficacious.

We should be pleased to find so simple and innocent an article as elecampain root, prove very successful in this case ; and hope it will be extensively resorted to ; as it may be tried in safety, even from the loss of time in cases of this kind, which are ordinarily not put under regular prescription, until the whole routine of domestic means have been unsuccessfully resorted to. Any definite successes with the remedy, accompanied with an accurate history of the case, its cause, duration, kind and manner of discharge, the menstrual condition, &c. &c., we should be particularly please to receive ; as such might be the means of giving us different views of the theory of those cases, from those we now entertain.

## MEDICAL INTELLIGENCE.

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**MEDICAL COLLEGE OF SOUTH CAROLINA.**—We regret that by some cause unknown to us, the announcement of the annual course of Lectures in this institution did not come to hand prior to the publication of the August No. of this journal. It would have given us pleasure to have noticed it under our head of medical intelligence, with others.

This institution is under the guardianship of the Medical Society of South Carolina, whose president is ex-officio, president of the college and its government is vested in a board of trustees consisting of eleven medical gentlemen, who derive their appointment from the Medical Society. Dr. J. B. WHITRIDGE is now the acting president. It has six professorships, filled as follows:

B. B. STROBEL, M. D., Professor of Anatomy,  
 ELIAS HORRY DEAS, M. D., Professor of Surgery,  
 THOS. Y. SIMONS, M. D., Professor of Theory and Practice of Medicine,  
 HENRY ALEXANDER, M. D., Professor of Inst. of Medicine & Materia Medica,  
 WM. HUME, M. D., Professor of Chemistry and Pharmacy,  
 FRANCIS Y. PORCHER, M. D., Professor of Obstetrics and Diseases of Women and Children.

Demonstrations of Anatomy, by B. B. STROBEL, M. D.

Dean of the Faculty, THOS. Y. SIMONS, M. D.,  
 Clinical Lecturers.

At the Alms-House, EDWARD ELFE, M. D.

At Marine Hospital, WM. G. RAMSEY, M. D.

In the "Announcement" by the Faculty, we are informed that the annual course of Lectures for the ensuing season will commence on the second Monday in November.

In addition to a commodious edifice for the purpose, its Museum and Laboratory are said to be amply supplied, and a Library of about 2000 volumes, and opportunities for clinical instruction are afforded for the benefit of pupils.

**MEDICAL PREMIUM.**—The New York Medical Society, at a recent meeting, passed the resolution that *one hundred dollars* be offered for the best dissertation on the following subject:

"Diseases of the Spine, their causes, symptoms, and best mode of treatment."

DRS. JNO. B. BECK, JAS. R. MANLY, RICHARD PENNELL, JNO. C. CHEESEMAN and THO. DOWNING are appointed the Committee on Prize Questions for the ensuing year.

Dissertations to be sent to the Committee before the 1st of January, 1838.—*Bost. Med. & Surg. Journal*

**MANSLAUGHTER BY THE STEAMERS.**—John Morgridge a kind of chief among the steamers, and the principal of a Thomsonian Infirmary at New Bedford, (Mass.) has been arraigned for manslaughter in the case of Mrs. Eliza Howland of that town.



The unfortunate subject of this fatal quackery, was, with the exception of a periodical head-ache, in pretty good health. This chief administered his "numbers," lobelia, cayenne, &c. &c., in the usual rapid succession. The patient died apoplectic—the corpse remained heated a long time—was examined and every important organ found congested with blood. These facts are given in the N. Y. Gazette, the Evening Star, and the Saturday Evening Post. The legal examination was expected to be long and tedious: and as it is but the beginning of these prosecutions, may terminate in the exercise of mercy to the guilty wretch. But facts will multiply, and the observation of them, as they daily occur will be duly regarded and investigated. Then will the just indignation of an insulted and injured community burst with retributive vengeance on the heads of these reckless imposters.

There are always those who, for a few shillings will step forward to "clear the guilty and to varnish crimes," but the reign of reason will come. Judges, jurors, and legislators will see the sad error of a toleration which spreads ruin on every hand; and as in England with Morrison's pills, so will *convictions* of manslaughter, be found after a little on every court docket.

This case reminds us of one which occurred very recently in our own immediate neighborhood, in which death was produced in a very similar manner. The unfortunate subject in this case was a very worthy young mechanic from Baltimore. He had been a little complaining from the effects of a slight cold and perhaps a somewhat bilious habit; but was about the house on the morning of the fatal day. The steamer prevailed on him to be taken through a "*course of medicine*" as he is pleased to call his treatment. The day was one of the warmest in July or August last—(the mercury rising daily to 93 or upwards.) Blankets, hot rocks &c. &c. were collected in abundance for the external "*practice with caloric*," in due obedience to the bill of rights granted by the legislature: and what they call "warm tea only," when the patient escapes death, (and which is well known to consist mainly of African cayenne,) for internal heating—also agreeably to their bill of secured rights. They were liberally applied and administered, in a small close room, *a la mode de Thomson*, during which the temperature of the room was considered to have afforded a "caloric" power of about 200 degrees for the skin and lungs, in addition to the internal administration of exciting means. In this state of things, and doubtless, when the steamer was indulging a full hope that the "caloric" would operate to good effect, the unfortunate young man happened (strange to tell,) to take a violent apoplectic fit which continued a length of time and terminated in death. We were summoned in great haste to him at 2 o'clock P. M. found him perfectly livid from apoplexy; and gasping in death, he breathed his last before his arm could be bound for bleeding!





Fig. 1



Fig. 2





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## PART I. ORIGINAL COMMUNICATIONS.

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### ARTICLE I.

*Observations on the Pathology and Treatment of Enlarged Spleen. By A. C. BALDWIN, M. D., of Saint Clair, Burke County, Georgia.*

IN those sections of the Southern states which favor the generation of fever, the spleen is peculiarly subject to disease. As the result of neglected intermittent or remittent fever, its enlargement to a greater or less extent is almost inevitable. Be the attack ever so mild, if the case is left to nature, the spleen will measurably participate in the deranged state of the system, and will be the last organ to recover a healthful condition; and even, under the most judicious method of treatment, such a result is by no means uncommon. Forming as it were the second link in a chain of morbid action, and being itself a consequence of prior disease, in its turn, it forms a foundation for other and more troublesome affections. Passing over those of minor importance, the number of dropsical cases which result from it are too numerous to have escaped the observation of practitioners generally. It is therefore a little surprising, that

enlargements of the spleen have been so much neglected. Regarding them as the effect of disease, physicians acting upon the principle that the cause being removed, the effect must follow, have contented themselves with merely prescribing for the original fever, without remembering that the consequent engorgement of the spleen is sufficient to keep up an excited state of the heart and arteries, and thus, whilst it lasts, entail upon the patient a perpetual state of fever. Of this last fact, any one may satisfy himself by examining the pulse of a person in whom there exists an enlargement of the spleen. To the extent of my observation, and that has been considerable, it is always more frequent than in health. This condition of the pulse has often induced me to suspect the existence of enlarged spleen, whilst examining patients during the intermission or remission of fever, the excited state of which I could not otherwise account for ; and the result of an examination has generally confirmed my suspicions.

Several varieties of enlarged spleen have been mentioned by writers, but it is not my intention to notice any other than that which results from intermittent or remittent fever, it being the most common, and the one which I have most frequently met with in practice.

With some individuals, the power of the spleen to resist the incursions of disease, is much greater than in others, affording them a happy exemption in a majority of cases from attacks of the disease under consideration. Several persons of my acquaintance, thus happily circumstanced, pass through protracted attacks of fever, and finally recover without any consequent enlargement of the spleen ; whilst others less fortunate from comparatively trifling febrile affections, uniformly have their spleen enormously enlarged. To account satisfactorily for this difference of susceptibility to disease of the organ in the one and in the other instance, is perhaps impossible ; although we may reasonably attribute the absence of enlargement in the one case, to an unusual smallness of the artery which supplies the organ, thereby preventing an undue quantity of blood being forced into its vessels in a given time ; or to a more powerful exertion in the veins and absorbents in removing the supplies which have

been furnished, and in this manner preventing accumulations which would otherwise take place, by keeping up an equilibrium in the circulation of the part threatened with disease.

To explain the pathology of the disease, but few words are necessary. It consists in a simple congestion of the organ, the production of which may readily be accounted for, when we consider that the splenic artery is much larger than is requisite for the mere nutrition of the spleen; and that, consequently, under a general excitement of the circulation, it must convey an undue proportion of blood to its place of destination, where it must remain producing congestion, or must be carried off by vessels destined to this office. So long as an equilibrium is kept up between the vessels collectively, no engorgement, or undue accumulation, can take place; but, on the contrary, if the repletion is greater than the depletion of the organ, we at once have a case of the disease in question.

The diagnosis is by no means difficult. The pulse and the general appearance of the patient, may induce us to suspect an enlargement of the spleen; but, the most certain, and never failing criterion to determine the fact, is the presence or absence of a hard body, commonly called a fever cake, in the left hypochondrium, to discover which nothing more is necessary than a slight examination with the hand.

In the treatment of enlarged spleen, various methods have been adopted. Emetics have been recommended by some, and for all I know to the contrary, may have proved advantageous; but of this I know nothing from experience, never having prescribed them. Various external applications, as iodine ointment, mercurial ointment, blisters, &c., have had, and still have their advocates; all of which, with the exception of the first mentioned article, are more than useless, being calculated in themselves to produce more or less uneasiness, without the possibility of their doing the least imaginable good. The same may be said of the blue pill and other mercurials given with the view of producing salivation; for no one, I am satisfied, has ever been cured of an enlarged spleen by a salivation only; nor can I conceive of any case in which a salivation would be necessary or proper. It may be stated, and ample experience will



bear me out in the assertion, that nothing more is necessary in the treatment of this affection, than the judicious employment of purgatives. In my hands they have always proved successful, when fairly tried, and I can confidently recommend them to those who may not have been in the habit of prescribing them. I have known an enlarged spleen to become much softer, and nearly one fourth smaller, judging from the appearance of the patient, and an examination of the organ, from the free action of a large dose, (3ij.) of the compound powder of jalap. It is not a matter of much importance what purgative is employed. In this respect, the practitioner may please himself, provided he selects an article which will purge actively, and causes its exhibition to be repeated at proper intervals for a length of time. With me no purgative is preferable to calomel. In all cases, it is the one which I first recommend, and from it I have experienced the most happy results ; giving it in doses of from ten to forty grains ; and following each dose in from two to four hours, with a large dose of castor oil, or some other certain cathartic, which not operating well is repeated again, and again if necessary. This purge of calomel and oil is directed to be repeated every second, third, or fourth day, as circumstances, and the strength of the patient may indicate, it being expected that the general health is to improve under this periodical purgation, which is to be kept up for weeks if necessary, or until the enlarged spleen has been so much diminished as no longer to prove a source of inconvenience. Although much attached to calomel as a cathartic in these cases, I by no means confine myself to it entirely. The blue pill in combination with aloes, using two parts of the mass to four of aloes, I have frequently prescribed; and this compound in doses of ten to fifteen grains, from its activity, has often been used with advantage ; although in a majority of cases, it is necessary to follow it by some more prompt cathartic, as oil, or the sulphate of magnesia. As the size of the spleen diminishes, the interval between the exhibition of each cathartic may be prolonged, until once or twice a week will be often enough for their administrations. In many cases, the occasional use of a tonic in addition to the purgative plan of treatment is absolutely necessary. No tonic is preferable to quinine.

It may be given on the days intervening between those of exhibiting the cathartic. No particular attention need be paid to the diet—such articles of food as suit the patients' appetite, being generally allowable; nor is it necessary to keep the house or bed to insure a recovery.

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## ARTICLE II.

### *On Menstruation by M. ANTONY, M. D. of Augusta, Geo.*

"Propter solum uterum mulier est id quod est."—HOFFMAN.

Passing by the special anatomy of the uterus, a brief account of which was given on a former occasion,\* with which every reader desirous of comprehending the functions and diseases of that important organ should be familiar; and in order that the pathology extensively connected with its structural and functional derangements may be better comprehended, I purpose considering in this place the character and philosophy of its primary function under the circumstance of good health.

The expression of Hoffman quoted at the head of this article is most true, and when duly contemplated in view of its truth, becomes a most fruitful source of knowledge of the natural history of woman as well as of her pathology.

It is indeed to the uterus that woman is mainly indebted for her peculiarities of character; even her peculiarity of configuration being determined in the latter part of the third epoch of her life, in part at least, by the developements preparatory to conception and child-bearing. Her peculiar softness and melody of voice, together with the child-like simplicity and abiding confidence which are part of the characteristics of her sex so calculated to command the tenderest cares of man—the yielding softness of her nature, all, as I shall attempt to shew, owe to uterine

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\* See Southern Medical and Surgical Journal vol. I. page 171.

and other peculiar female developments their value ; whilst her peculiar acuteness of sensibility, exalted moral sense, and higher order of refined taste are no less the products of that change of proportionate developement whereby the female conformation is mainly affected in the progress of the third epoch, and the genital developements are fully completed.

But besides the concurrent peculiarities of the female, just alluded to, her various succeeding healthy peculiarities will be found reflected on her natural character, by the structure and healthy functions of the uterus and the various derangements thereof.

I shall in the first place offer to the reader some received definitions in relation with the subject before us ; then proceed to give the healthy phenomena of menstruation, and lastly, to shew the philosophy of the *rise, progress and decline* of this function ; all of which afford extensive data for the reasoning of the pathologist.

In thus pursuing my subject I shall use freely of such materials as are before the profession ; and in some instances, (especially in anatomical facts,) without stopping to make direct reference to the source ; as the facts which are known are made public property.

**I. Menstruation.** This is a term which may be considered as generally used to include every thing relative to the cause, nature, appearance, duration, quantity, quality, use, successive returns, final cessation, &c., of the menstrual discharge.

**Menses.** This word is used to designate that periodical, red discharge which healthy women afford from the genital organs, when not pregnant nor lactating ; ordinarily in temperate climates from the age of fourteen, to forty five years. TURTON\* defines it the monthly purgations of women." PARR, "the periodical discharge of *blood* from the uterus or vagina, or both." MAURICEAU, "the *menstrual* is so called because it is evacuated periodically every *month*, when the female is of suitable age and good health, if she is not pregnant nor giving suck." MAGENDIE, "a periodical *sanguineous* discharge which

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\* Editor of the Linnæan system of nature, and author of the Medical Glossary.



takes place from the internal surface of the uterus, and is a *true sanguineous exhalation*." BAUDELOCQUE, "a periodical depletion which follows a sanguine phethora." J. CLOQUET—"a periodical evacuation of *blood* from the female organs of generation, from the age of puberty to that of forty-five or fifty years, and which ceases to appear during pregnancy and lactation." Mme. BOIVIN, "a *sanguine* excretion which women afford regularly about every month from the genital organs, from puberty to forty five or fifty years."

Various other names have been given to this discharge, as *catamenia*, *menstrua*, *emmenia*, &c. It has also been called *menses*, *flowers*, *flows*, *monthly discharge*, *show*, *regular discharge*, *time*, *epoch*, *moons*, *affairs*, &c. &c. and is often alluded to with a nod. Before the days of MAURICEAU, (seventeenth century,) this discharge was called "*monthly purgations*," because, as was then believed, the whole habit of the body was thereby purged of its superfluity of *blood*. This old, but eminent practitioner and writer also informs us that it had, by a beautiful allusion to vegetable nature, received the name of "flowers of women." As trees do not bear fruit until preceded by flowers, so likewise women do not ordinarily become pregnant of an infant before they have these flowers.

Madam BOIVIN, a scientific female, having enjoyed the most ample opportunities afforded by her greater facility of access to females under all circumstances in society, by her general intercourse as a female practitioner in Paris, and by her situation as chief superintendent of the Royal Mansion of Health, with all desirable opportunities and capabilities for anatomical research, all of which were well embraced, I cannot do more justice to a statement of the phenomena of menstruation, than by giving her own on this subject.

"Notwithstanding," said she, "I have sometimes seen infants of five or six years, and even younger, discharge by the vulva a sanguineous excretion more or less regular in its returns, still in the order of nature, it is not until puberty that this excretion is established in a regular and periodical manner. This epoch which generally announces and characterizes the aptitude to fecundity, varies much, according to the constitution, climate, education, exercise, and various accessory circumstances. Most commonly, it is not until the age of fourteen or fifteen years,

and when the mammæ begin to develop themselves, that the menstrual flux appears and is established. Derangements in the order and duration of this discharge commonly occasions disorder in other functions.

"The quality of *menstrual blood* does not appear to differ from that which circulates through the whole system when the woman is healthy, well formed, and when she conducts herself according to the requirements of health and propriety.

"The duration of this evacuation varies from three to six days. There are women who have this discharge only one or two days, and others, some hours only.

"The menstrual flux is generally suspended during pregnancy and lactation. When it does appear in the former case, it is ordinarily a *symptom of disease*, indicating a partial separation of the ovum. Also when the blood does not appear at the stated period which corresponds to the time when the woman previously had her menses, it is a very good sign of disease, except in pregnancy." \* \* \*

"*Causes of Menstruation.* The opinion most generally received is that a plethora, general or local, causes this evacuation. PINEL said it would be found as difficult to answer this question as to explain the cause which made certain plants crown themselves with flowers oftener than others. The cause of the *periodicity* of the menses is not better known.

"Whatever may be the cause of menstruation, to it is generally attributed the virtue (*propriété*) of preparing the cavities, which ought, in their turn, to furnish the blood destined to pass into the radicles of the placenta. But the development of the placenta, and that of the fetus, *without* the uterine cavity proves that menstruation is not essential to the preparation of *these cavities*; or rather, that the placenta can do without (*se passer*) this preparation. It appears that the fecundated vesicle is capable of developing and enlarging itself every where when in contact with a vascular and nervous part. In the many cases of extra uterine pregnancy which we have seen, there was one at the term, at which the infant weighed eight and a half pounds.

"Nevertheless, the influences of the menses on fecundation will not be denied, since before menstruation, after its cessation\*

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\* Not long since a case was related in the Boston Med. and Surg. Journal, in which a woman was delivered of a child about 24 years after the cessation, and during the last year a case came under my own advice, in which the woman had ceased to menstruate some 20 years, and whose youngest child was about 24 years old. This woman had remained in health, and the wife of the same husband. She was in her 8th month when I was consulted on her case, and has since passed an easy and happy accouchment.

and even during any remarkable irregularity, conception does not ordinarily take place. On the other hand, we remark that women are more apt to conceive at the approach of their menses, or immediately after, than in the middle of the term between the menstrual periods.

“With those whose menstruation is interrupted, this excretion is commonly replaced by some unusual *sanguine* evacuation; any part of the body being capable of becoming a supplementary emunctory for preserving the health of the individual.\* Many examples are cited of women who have brought into the world well supported infants, without ever having been regular, as well as others after having ceased to be. Finally, “a woman, who on the approach of the menses proves to have pains in the head, and in the lumbar regions finds herself relieved that instant at which the menses appear, however small the quantity of blood which is afforded by the uterus; neither the application of leeches to the vulva, nor bleeding at the arm being able to produce an effect so prompt and salutary.†”

As I before observed, Madame BORVIN's account of the phe-

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\* See at p. 767, vol. I. of this Journal, M. Bourgeois' case of an amalous menstruation, in which it took place from the extremities of each of the ten fingers of a young lady. A case occurred a few years since, under the observation of a medical friend, in which the discharge was vacariously effected through a sore on the leg.

Partial menstruation, in which the evacuation in the natural way is not so much as it should be, is perhaps always—I should say doubtless always compensated in another way by some other part. But the phenomena are not always discoverable. I now have a case under my direction in which the tonsels have so enlarged on the approach of each menstrual period for several months, that the former attendant on the case contemplated the necessity of operating on them: but their enlargement has subsided after each period. On promoting ample menstruation, which was done by rectifying the prolapsed uterus, the enlargement has almost entirely ceased to manifest itself.

I have another case of difficult and partial menstruation from prolapsus, in which a pustule has occurred every monthly period with great regularity for many months somewhere on the lips or face near the mouth. On the correction of the cause at the period before the last, so as to secure a pretty good evacuation, the pustule which arose was very slight, and did not mature itself, but passed off by resolution. At the last period none appeared. In both of these cases, the mammæ became very sore and considerably swollen and hard on the approach of the period. This last phenomenon is of very common occurrence in tardy and difficult, or partial menstruation often affording a watery, and sometimes a milky discharge from the nipples. The varieties of vicarious phenomena for menstruation are innumerable. This teaches us the indispensable importance of investigating *more scrupulously* the condition of this function in our research for *cause* as well as *nature* of disease in females.

† See *ars des accouchments* p. 104.



nomena of menstruation is worthy of high confidence. In regard to the points in dispute amongst physiologists she, with that prudence which generally characterises her conduct, avoids entering into doubtful disputations, and has generally contented herself by setting forth the existing doubt, or giving some of the most respectable opinions on the subject in dispute.

Most of the facts of menstruation are too well known to justify the appropriation of much more time to them ; a bare recapitulation, therefore, of those mentioned, and a brief reference to a few not hitherto named, with some of the most common anomalies shall suffice. In the notice of those facts, however, it should be remembered that I describe the general course of nature in relation thereto ; and to these, as general facts there are exceptions,—wanderings from the regular order of things, which however, arise from very peculiar circumstances in the nature of the individual, or some existing morbid condition or propensity.

In healthy young females in temperate climates, the discharge generally makes its appearance at fourteen years of age, or thirteen to fifteen. Its first appearance is generally indicated by a sense of weight about the loins ; heaviness, and often more or less pain in the head, leaden color of the skin within the orbits of the eyes, pricking and pain in the nipples, shooting pains in the mammæ, pain and more or less sense of weight in the hypogastric and inguinal regions. Some, if not most of these symptoms, ordinarily indicate the approach of the menstrual discharge. These, however, sometimes pass off for the present period without being followed by the actual red, but a more or less leucorrhœal, or sero-mucous discharge,\* and the subject regains her usual state of comfortable feelings, in the enjoyment of which she remains for about one lunar month, or twenty eight or twenty nine days ; when, probably, if not before, the

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\* These first sero-mucous discharges should be borne in mind, as they are, *for the present*, the proper menstrual discharges for the *present* state of development of the female proportions ; and will serve to explain those cases of impregnation which are said to occur before menstruation. There is also a like manner of discharge occasionally appearing after the final cessation of the flux of blood, which will also account for those cases of post-menstrual impregnations which sometimes take place early after cessation.

discharge called menstrual, makes its appearance from the genital parts, and continues, with a gradual alleviation of those symptoms which have been named, for three, four, or five days, by which time they become pale, and finally cease entirely for another lunar month. Thus continues the woman, if healthy and unimpregnated, until the age of forty five or fifty, when, after becoming more or less irregular, they cease to appear forever.

Besides the influence of climate on the periods of appearance, and final decline of menstruation, various anomalies are sometimes observable, such as recurrence at a regular period of two, three, six, or eight weeks—the occurrence of a precocious periodical discharge as early as three, four, five, or six years—recurrence as late as sixty or seventy years—the limitation of the period of flowing to a few hours, or a day or two; or its extension, to eight, ten, or fourteen days—menstruating regularly during pregnancy and lactation as at other times—menstruation during pregnancy only\*—menses never occurring in pregnancy, lactation, nor any other time.† &c.

But notwithstanding these and many more possible and actual wanderings of nature, still, in good health, it is extremely regular in the periodical returns, as well as the time of continuance and quantity of discharge at each period—lasting from three to six days, always the same in the same individual in health; and so regular in its periodical returns, that the female, if intelligent and observing, can tell in some instances, not only the day or night, but even the hour at which it will return with the exactness with which the phases of the moon may be told,—all of which facts demand *due consideration* in the investigation of

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\* DEVENTER in his arts of accouchment, gives a case of this kind—also other authors.

† GARDIEN in his complete treatise on accouchments, says, that although sometimes the discharge of red blood appears at the very beginning, still it is more commonly the case that menstruation commences by a serous flux, and terminates in like manner. He says also that Roudelet mentions a woman who was delivered twelve times,—and JOUBERT another who bore eighteen children, neither of whom had ever menstruated. Doubtless these were cases of serous menstruation, similar to that first menstruation described, after which it is possible for conception to take place.

disease. Nor is it a matter of less importance in pathological investigations, that it should be borne in mind that the anomalies which have been mentioned are so rare that they are always to be regarded as morbid phenomena until a rigid investigation has demonstrated them otherwise.

I have noticed the general characters of this function, and briefly referred to those anomalies which do occur and comport with good health, with the design of reminding the reader of the boundaries, or rather, the *possible* extent of physiology, in his research after disease; and although the design of this essay was physiology alone, still it may be well, by way of application of the preceding pages to practical utility, to observe in this place that it is important to distinguish between the true *physiology* of the case before us, and its *pathology*.

For instance, it may be a serious departure from health in a particular case to menstruate three or four days, when the natural period was five days; or five days, in one whose natural period was three or four; the former being excessive if the flux be at the same rate, and the latter, deficient. Or five or six days may be a deficiency, when the natural durations of the period is seven or eight, &c.—Or the anomaly in which menses appear during pregnancy alone, or that in which they appear in pregnancy as at other times, may be simulated by the occurrence of slight uterine hemorrhage from other accidents than the physiological nature of the individual; but which tend to, and may end in abortion. In this case, as in all others, we must observe with great caution the real boundaries of physiological function, not only generally, *but in the particular case under investigation*. We must recur to the pristine state of this function in the individual, or its state at such times as her health was least exceptionable, and thus find what constituted *her* regularity particularly. And, even by this index we may be deceived; nor is this deception so rare as may be supposed; but when suffered, is productive of no little perplexity. It is not unfrequently the case that a woman is found to menstruate precisely at the period of a lunar month, and have a continuance of the flux three or four days at the ordinary rate; and it may be, that she enjoy a very satisfactory exemption from present pain of any part; and still the foundation is being gradually laid for the destruction of



health by hepatic, pulmonary, or other derangements. Here on the strictest examination of the menstrual functions *alone*, the practitioner is compelled to pronounce the patient perfectly regular. But there is a resort for the avoidance of this error in physiology and pathology, which is, to the philosophy of other morbid phenomena, to the thorough knowledge of which, the knowledge of the true causes and nature of the menstrual discharge is necessary.

Thus much have I thought proper to state relative to the facts of the primary function of the uterus. These facts are calculated to have their practical use, as all other physiology, in enabling us to judge, by a knowledge of healthy function, the existence, the kind, the cause and the extent of disease. But it was an additional purpose in commencing this essay, to attempt the further elucidation of some physiological points in connection with this function. The enquiring mind is not content with composure in indifference to the truths of nature, when so much of the beauty of infinite wisdom is found at the end of all thorough investigation in natural history, and particularly in the human economy. We should not be satisfied with merely viewing this function as an isolated phenomenon in the history of the human female. It would indeed be but a poor display of wisdom and benevolence—but a burthensome affliction intailed on those who are the subject of it, ever driving their delicate sensibilities to self-disgust; and, were it not connected with the *nobler ends* of female construction—were it not arising in the first place, out of those peculiarities which woman, in view of being the mother of mankind is made to possess—were it not connected with her aptitude for that ripest perfection of organic sense by which she is rendered capable of conception; and finally, were it not in connection with the support of the offspring in its most dependent state, that is to say, whilst in the womb and soon after birth, it would ever present a most loathsome phenomenon to the other sex. I shall now proceed to the physiological elucidations to which I have just referred.

1st. *Of the nature of the menstrual discharge.*—Much has been said by physiologists relative to the *nature* of this discharge. The ways of nature are generally plain and simple when known, and it is a fact which abundant observation proves, that nature

is *strictly economical* in all her purposes and operations—never requiring more causes than are adequate to the effect; or rather she seems to delight in effecting her purposes by the simplest and fewest means possibly consistent with their well-doing. We need not search for causes, the existence of which we cannot determine, when we have *adequate* causes, known and present. We should have to wander far indeed from the truth of anatomical demonstration, were we to declare this discharge a *peculiar secretion*. Yet such has been the course of some of the greatest physiologists, and even of the present day. It would be idle to occupy the time of the reader by repeating and contesting every opinion which the imagination of man has brought before the world on this subject. It is thought sufficient to meet some of the arguments and opinions which have, more than others, withstood the withering blasts of reason and demonstration so as still to retain a place in the schools at the present day. As such, we shall take for our review the doctrines taught by the highly accomplished and justly celebrated late professor of midwifery in the university of Pennsylvania, and which, so far as there is reason to believe, yet obtain in that respectable institution. And I would here state once for all, that I know of no professor or author of the day, in whose statements of facts I have more, whilst there are many in whose I have not equal confidence. But however unequal the contest may seem, I feel bound to oppose his reasonings from those facts, and the conclusions to which he comes;—resting confident in the power of truth, and trusting to the end of the contest for my justification. In all ages, from the time of HIPPOCRATES and GALEN, down to the present, the idea that the menstrual is a genuine sanguineous, (or in its less perfect state, a serous) discharge has found abundant advocates in the ablest physiologists of the day. And now it is plainly observable that all the most celebrated writers of France seem to receive this as a settled fact beyond controversy; and on this point, I would observe that when we consider the advanced state of medical sciences, and the habits of familiar intercourse the enquiring disposition and the facilities for anatomical and physiological investigations which Paris affords, all of which combined give opportunities for the acquisition of truth never before equalled; these physiologists are entitled

to the highest respect. So much for long standing and high privileged authority.

Still, however, the idea that the menstrual discharge is a *peculiar secretion*, has been taught by HALLER, HUNTER, SAUNDERS, and others of former ages, and advocated by Dr. DEWEES of the present age.

In his preparation for the support of the opinion that the menstrual discharge is the result of a secretory process, Dr. DEWEES attempts in the first place to draw preparatory support from the "*structure and diseases*" of the uterus,\* thus: independently of considerations derived from the structure and diseases of the uterus, &c." To this assumption, or rather supposition, it must, in honest faithfulness be replied that the anatomical facts in point not only forbid such an idea by completely demonstrating the *want of appropriate structure*, but actually display every necessary construction and arrangement for a periodical discharge of just such *blood* as the menstrual flux exhibits.

From his expression which we have just quoted, one would suppose that a regular glandular arrangement of the uterus was demonstrable, and that, so curiously supplied with sensibility, as to be competent, once in a lunar month, to take on suddenly its discerning action, and eliminate from the system from 3 to 6 or 12 ounces of secretion within a few days, then close its operation for a month, and so on; and this too, to have its secreting energies increased by a relaxed and debilitated habit,—for it is a notable fact that delicate habits generally afford 3 to 4 fold more menstrual discharge than those of robust, strong and energetic habits. But no such "structure" will be found.

The Doctor next proceeds to derive "confirmatory suggestions from the *appearance* of the fluid itself. One of these two propositions he feels bound to receive: This discharge," he says "must be *either* a portion of the common mass of blood as it circulates in the system; *or* it must have undergone some change during its separation from the uterus."—If the former" he continues, "it should exhibit the appearance of blood detracted from any other part of the body by opening a vein for the purpose;

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\*See his systems of Midwifery page 50.



which it does not do. If the latter, it is *probable* that it has been eliminated by that process termed secretion." This last proposition or avowed *probability*, he then considers strengthened by the following considerations of the physical properties of the fluid itself.

1st. Its colour is between that of arterial and of venous blood ; being less brilliant than the former and more so than the latter.

2d. It never separates into parts as blood drawn from any other part.

3d. It never coagulates,\* though kept for years whilst other blood, when free from disease and exposed to the air quickly does this.

4th. Its odour is remarkably distinct from that of the circulating mass ; and it is less disposed to putrefaction."

Here I would meet the doctor at the very foundation of his two propositions, and shew that by them he has only spoiled the truth by dividing it—that his *probability* which he assumes in the 2d proposition is but a *petitio principii* and which, when assumed, instead of deriving substantiation therefrom, it only tends to a *false explanation* of the four several physical properties of the fluid. By only exchanging his distributive *or* for the copulative, *and*, we shall have a new proposition declaring the truth thus : *This discharge must be a portion of the common mass of blood as it circulates in the system, and it must have undergone some change during the separation from the uterus.* This is, as a whole thus connected, a proposition, the substantiation of which cannot fail to refute that adopted by him and explain the phenomena of the "fluid itself" (by which he attempts in vain to strengthen his opinion,) in another and more rational manner.

In the substantiation of this proposition which I have thus compounded, *I draw all* desirable evidence, from the "structure"

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\* "We too often see it escape in clots from women when they get up to walk about, after having been long in a sitting position, to be able to say with DIONIS, that menstrual blood never coagulates. According to all appearance, it contains less fibrin than that from other parts of the body, but is not entirely without it. Being mixed with the mucous and serous matters naturally furnished by the internal surface of the genital organs, the menstrual blood is thus rendered more viscidous, and ought not to exhibit the same characters as that which escapes from a wound.—*Velpéus Midwifery* p. 86.

of the uterus. It will not be forgotten that the various arteries which enter the uterus are very intimately connected with the ovaries, so that the removal of these by excision or their destruction by disease, (which is said by the Doctor to destroy menstruation,) must necessarily injure, and that to a great extent, if indeed it do not entirely destroy some of the most important branches: therefore nothing can be fairly inferred from the removal or other destruction of these organs. But the arteries which do go to the uterus terminate variously—as by anastomoses, by exhalent extremities opening on the inner surface; and “other branches,” &c. “*pass to the uterine sinuses,*” which, as I have before said in speaking of the lining membrane of the cavity of the uterus, open into the cavity by the most considerable openings which appear in the reticulated membrane. Here, then, is abundant anatomical structure to indicate plainly its purpose.

I next come to explain, from the facts presented, the whole proposition which I have offered. The first member of the proposition considers the discharge as being a portion of the common mass of blood. HIPPOCRATES, the most respectable authority in ancient medicine, whose close and correct observation has been constantly before the world—the *most worthy* example for imitation, and which has established so many truths which have withstood the relentless hand of time and the revolutions of centuries, says, “this blood is like to that of a victim, and coagulates promptly if the woman be well.”\* The most perfectly healthy animals only were chosen for the ancient sacrifices; hence this comparison.

MAURICEAU, when Prevost of the company of Master Surgeon Jurors of the city of Paris in 1672 had, and embraced the opportunity of examining the body of a woman who was hung for a crime, at the time of *actual menstruation*. All that portion of the cavity of the uterus about the fundus was plaistered over with coagulated blood, and the vessels here were much larger than those of the neck. He distinctly saw these coagula connected

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\*“Procedit autem sanguis velut à victimâ, et citò congelatur, si sana fuerit mulier.” Vid. Oeuvre de Mauriceau, Tome 2<sup>me</sup>, Descrip. Anatomique, &c., chap. x. page 47.

with those vessels about the fundus, which disgorged themselves of the blood.\*

Madame BOIVIN, to whose excellent opportunities and capabilities I have before alluded, says she has had occasion to see the uterus of many young females who died *during the menstrual epoch*, in whom the internal face of the uterus was covered with a coat of bright red blood;† and this fluid she caused to pass out of the vessels which afforded it, in small drops, by simple compression, or plunging them into warm water. These *absolute facts* should be considered highly satisfactory evidence of the truth that the discharge, as it passes from the vessels, which yield it into the cavity of the uterus, is but a portion of the “common mass of blood as it circulates in the system.” It is caused to coagulate by the circumstances of the body in death, before it undergoes those mixtures which will be presently described.

It has been observed in describing the vagina, as well as the neck and body of the uterus, that all these parts are generally moistened by a mucous secretion for the purpose of lubrication and the ordinary good condition of the parts for their functions. This mucous is not coagulable by any ordinary temperature, or atmospherical exposure. Nor is it readily susceptible of putrefaction. It is in considerable quantity—so much so that I have several times observed it passing after death, from the vulva even of girls, but a few years old, in consequence, as I presume, of the contractions of the uterus in death, from the cessation of arterial action.

In the sinuses into which the blood is poured by the arteries, those changes commence, which cause it to approach “more nearly to the color of venous blood.” In this state it is poured during menstruation, into the cavity of the uterus, where it enters into immediate and complete mixture with the mucus of the part. This mucus is so viscid that on an even mixture with the blood, the latter will thereby be prevented from separating into parts. It is rendered incoagulable in like manner, by being

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\* Oeuvre de Mauriceau.

† “Couverte d’une couche de sang d’un rouge vif.” Memorial de l’art des accouchemens.



in even mixture with this mucus, as it is in the usual healthy menstrual flux. But should the discharge of blood exceed the usual quantity in proportion to the mucus, it then becomes coagulable because the proportion of mucus is not sufficient to preserve *this quantity* from coagulation.

This mucus is coagulable by astringents, as alum, tannin, &c. So also is the menstrual fluid.\* The peculiar odour which the mucous secretion possesses is combined with the blood, and this, added to the natural scent of blood gives the odour so “remarkably distinct from the common blood.”

Here then are found *unavoidable* and *competent* causes for all the phenomena of colour, of inseparability, noncoagulability and odour; the principal grounds on which the advocates of peculiar secretion have relied. Here is found an explanation of all the phenomena presented, in perfect and happy accordance with that simplicity and economy in which nature ever delights: and here, too, do we behold the kindness of Providence in the happy arrangement so well calculated to preserve from pain in ordinary menstruation, which would otherwise exist in consequence of constant coagulation. Believing this error needs no farther arguments for its final refutation to settle the true physiology of the function, I shall next proceed to the consideration of the causes of the beginning, the continuance, and final cessation of menstruation.

*Of the causes of the rise, progress, and final cessation of the menses.* From the view we have taken of the *nature* of the menstrual discharge, we may well consider it as a periodical hemorrhage—the chief difference between hemorrhage and menstruation being that the latter is natural—there being an organization especially constructed for this purpose, and *for which*, when we consider the end for which woman was created, and that state of the system necessary to that end, there is from the beginning, a *necessity*: whilst hemorrhage is unnatural and not from structure organized for that purpose. The latter is the effect of accidents which temporary causes create—the former the effect of wise design.

There are, at least in the earlier part of human life, certain

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\* These facts are constantly observed in the application of vaginal injections containing alum or tannin.

periodical changes which take place, the precise cause of which it would be difficult to explain, unless it be merely a part of the order of development established to suit the being to the different relationships in life, to other beings of the species, and the other circumstances and periods of that life. These periods have been called septennial, as they have been observed every seven years. In man these epochs are marked,

1st., By the dropping of the milk teeth at about seven years, and their replacement with new and more substantial ones.—During the first epoch, that of infancy, he has the roundness of form, softness of flesh, of voice, &c., which may be considered as belonging to this epoch. Both sexes run very much together in the marks of this epoch.

2nd. During the second epoch, the roundness and thickness of childhood decrease, and the length of parts increases, and the whole stature becomes more spare.

In early infancy, the head is much larger in proportion to the other parts—partaking still much of that extreme disproportion which in the early fœtal state, gave to the head nearly half the weight of the whole; and the proportion continues to decrease until fullest maturity. During the progress of the first epoch the body expands in greater proportion; but in this, the second, the extremities, particularly the lower, extend in a much greater ratio than the rest of the system; and by the termination of this epoch, become, by their more rapid proportionate growth, in very good proportion to the other earlier developments; and, indeed, rather transcend, as those of some quadrupeds, the proportionate extent, and soonest acquire the proportion of the adult. By the end of this epoch, in consequence of the determination of growth to the lower parts, and the rapid accomplishment of the adult proportion of the lower extremities, the genital organs of each sex become sufficiently developed to enable them to perform their functions; although so far from that maturity of strength and hardihood as to render them, as yet, unfit for the *exercise* of function.

3rd. The third epoch begins with signal changes. The sexes now begin to wander from each other. The voice of the male begins to become more coarse and grave, whilst that of the female changes but little. The pilous system now begins to be

developed on the pubis of the male and female, and the downy beginning beard on the former. The menstrual discharge of the female, and the growth of mammæ go on. In man, too, the upper parts of the body—the thorax and shoulders begin to expand in greater proportion ; whilst the female growth is peculiarly directed to the lower parts of the body—the pelvis and thighs ; and these proceed on to that fixed difference of proportion which ever marks the two sexes during the period of maturity. The genital organs likewise go on improving in strength and full developement, the mammæ increase in size, the pubis becomes well covered with hair, and the finest proportions of which the individual is susceptible are developed by the end of this epoch. The appropriating powers seem to continue their offices in the hips and mammæ whilst they are mostly discontinued elsewhere, especially in the shoulders and the other standard masculine developements. Those parts grow and extend, as if for a much larger stature than the woman will ever arrive at—particularly the hips ; so that her pelvis, nates and thighs are much larger in proportion than those of the male. Her cellular tissue becomes more filled with adipose matter, which gives to her the roundness and softness which perfect the beauty of her sex. The cessation of the developements peculiar to the male seems thus to leave the surplussage necessary to menstruation—to child bearing.

“ During this epoch the amusements of childhood yield to maturer enjoyments—rational inquiry begins to be developed. Capricious attachments give place to sincere, unaffected and permanent friendship ;” \* all of which changes are making gradual progress to that maturity at which they are found at the end of this epoch, or twenty-one years of age, the earliest period at which Providence seems to have designed the union of the sexes, or at which that union seems rationally commendable. *Then*, and not until then is woman that creature whose developement of mind, and perfection and strength of organic construction combine to capacitate her for the efficient performance of the purposes, and the rational and prudent enjoyment of the pleasures of conjugal life.

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\* Cuvier.



Thus we observe the fact in human nature, that different parts are *successively developed*. We might have said that this is oped in like manner to the close of the second epoch, at which the developeing powers of the two sexes are differently directed; those of the male to prepare him for that superiority of stature, that greater size and strength of muscle, that larger brain, stronger bone, stronger and deeper voice, coarseness and thickness of skin, and more full pilous developement, and that greater harshness, firmness, and independence which both characterize his sex, and fit him for the various purposes of *his* life; whilst those of the female leave her skin, and muscles, and bones, and organs of voice, and hair, &c. &c., in all the delicacy, and softness, and roundness, and flexibility of childhood; being weak in body, comparatively feeble in mind and nervous energies, being variable, credulous, subject to the influence of the imagination, and to nervous diseases; whilst in disposition she is left soft, gentle, gaining by *address* rather than by *violence*; all of which mark the peculiar sex. But in this we have only told that the developeing powers have failed to continue the developement of some parts to that extent observable in the male. Still, however, the developing energies are not discontinued. They go on lastly to enlarge and perfect the organization necessary for pro-creation and the support of the race. The organs of generation are perfected. This done, the mammæ, the organs for future support are developed, and the hips and lower parts of the body are brought out to that proportion which best suits her offices in life. This done, and the same power which effected the progressive developement of parts which we have noticed, still, *by a rule of action peculiar to female nature*, continues to bring appropriations, which constitute *a surplussage*, which is now held in reserve, ready to be applied to farther developements whenever conception shall render it necessary.—But such is the ratio of increase in the female system, as continued after the full accomplishment of her personal perfections, that without conception, some kind of hypretrophy, or other form of constantly increasing disease would be the consequence of the retention of this surplussage beyond a certain accumulation. This we see threatened in the evidences of the near approach of the menstrual flux, which is indicated by head-ache, dullness of

most obvious from the earliest formation of the embryo. This continues until the whole body is formed, and both sexes develop, pain in the pelvic region, lassitude, whimsical appetite, &c., with or without a variety of nervous symptoms, as ringing in the ears, a sense of suffocation, palpitation, startings from slight and sudden noise, convulsive twitches, chorea, &c., and mournfully demonstrated in those organic diseases which seat themselves in the liver, lungs, brain, spinal marrow, &c., which we see constantly resulting from retained or suppressed menses without pregnancy; and in those diseases, the full developement of which we witness at the critical period of female life.

These then must, in the wise economy of nature, be *prevented*, which could alone be done by a timely elimination of this superfluousness from the female system. If then this be not gradually and steadily done, by passing into the foetal growth before its birth, or into the mammæ afterwards, it so fills, gradually, the uterine vessels that they are at length obliged to yield it up from the outlets of the uterine sinuses constructed for its reservation for the nutrition of the offspring whilst in utero.\*

Thus flows the menstrual blood from the uterus until the evacuation is sufficient to relieve that local concretion which requires it, and which, without it, would go on to the production of disease in some other part, or the general system.

A brief view of the manner in which the developement of the body is effected, may assist in exhibiting the rise, progress and decline of this curious function in a fairer light.

The vital fluid, it is truly said, is contained in corresponding vessels called arteries and veins; but the former only are active powers. In the veins, the blood is propelled by the adventitious aid of other muscular powers, assisted and secured at each step by valves. It is evident, therefore, that for the necessary support of the body, the *action* must bear a certain proportion to the *resistance*—otherwise, infarction would take place, or the arteries would be emptied. It appears to be a fact of observation, that the proportion of *arterial action* to venous resistance differs in different periods of life. Sir CLIPTON WINTRINGHAM has

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\* The fact of menstruation in the human female is an evidence of the design of Providence that mankind should not be admitted to promiscuous intercourse as quadrupeds, &c.

shown by actual experiment, that the density of the coats of the veins is greater in proportion to that of the arteries in *young* than in *old* persons. This proportion which these bear to each other is gradually changing, and after the acme of life, they are more equal ; or the resistance of the veins is little, in proportion to the action of the arteries. Now if we look to this curious fact, we shall find the true philosophy of the progressive growth of man for a certain portion of his life; his stationary condition, during the continuance of the full perfection of manhood, and finally, his decline when the arterial power greatly preponderates over the venous resistance.

This proportionate increase of power of the arterial system is to be accounted for on the principle of the increased development of muscular and fibrous parts by use—as in the muscles of laboring men. The moderate and prudent exercise of organs or parts, gives strength and energy of construction and function ; but the part or organ passively acted on suffers the overcoming of its resistance, and a loss of power and even substance. This is evinced in the increased powers of the muscles by their use, whilst the frequent pressure of their bellies during their action on the subjacent bone, flattens and attenuates the firm substance of the latter ; even to the production of apertures sometimes in the flat bones. The arterial is the principally active organization in the circulation—the venous, passive—hence by action and use, the former enjoys a perpetual increase of power and development, whilst the latter suffers a decrease of its resistance.

Nutrition is distributed to the general system—to each part by the arteries. The veins in early life are small and contracted. The resistance which they afford is sufficient to preserve the fullness of the arteries, and thus forces these to the continued elongation of their extremities, and the successive application of nutriment to the development of parts. This *predominating* venous resistance is no longer useful in man than during the *increase* of the body, and maturation of its powers : and in the wise economy of nature, it lasts until the whole formative propensity, or the outlines of the design for manhood are filled, and no longer. Arterial plethora, and venous resistance have thus far prevailed ; these now become equal. This done, or when



the venous resistance ceases to excel the arterial action, the parts cease to be developed, because the action and resistance are in equipoise. What takes place beyond this in the way of enlargement, is only from the yielding of venous, and other soft and containing parts, as the cellular tissue, &c. Now however, arterial plethora no more exists, nor has venous plethora yet commenced. This balance of power and resistance continues for a time, during the prime of life, until at length the arterial power, by continuance of exercise, increasing, whilst the venous resistance, from being long acted on, gradually declines and yields to the former, and the venous plethora prevails, as is plainly evinced by the fullness and elevation of the superficial veins, &c. Such appears to be the philosophy of the developement of the bodily proportions and phenomena of mankind, without regard to sexual peculiarity of arrangement and function. But had such alone been the provisions of the human female, the race had never been perpetuated. Man's proportion of increase had only to be so arranged that his arterial plethora should effect his developement to the full stature of manhood and maintain it there. But to answer the functions so important to the perpetuation of her race, woman needed a provision not only for her own full developement to perfect womanhood, as displayed at the end of her third epoch, or 21 years; but for a farther surplussage similar to that which prevails during the arterial plethora of early life, which should still exist for the support of the offspring. Instead, therefore, of that fullness of appropriation which, in man, goes to the support of his greater stature and other peculiarities, so expensive to the nutrition, and which I have before pointed out, it is withheld from these appropriations and kept as a reserve surplussage ready for use in her peculiar functions as a mother. This surplussage, ceasing to continue farther the developements of parts in woman, leaves her genital system with all those peculiarities which we have named as belonging to her sex, and is directed to the uterus, the place where it is destined to be appropriated. Such is the structure of the vessels and sinuses of the uterus, that they readily yield to delutatio for a time, and a tropical plethora is the consequence; which, when so great as to excite uterine resistance, is relieved by a gradual discharge from the uterine sinuses, of that

blood which caused the topical plethora, and thus is menstruation commenced. ("The idea of a topical congestion or plethora was suggested as far back as the days of STAHL, and had loosely floated in the minds of physiologists before the time of CULLEN; but to him are we indebted for its expansion into a system at once elegant and correct."\*)

Thus has nature wisely provided for and effected a union of the delicacy and softness—the roundness and flexibility—the confiding credulity and gentle yieldings of childhood, with the full developement of female perfection and beauty, as displayed in adult verginity: when, animated by the passions, emotions and sympathies which belong to her nature, and crowned with the sacred blush of modesty, woman is presented, full of charms and graces, which unite to render her a being the most enchanting—prepared by infinite wisdom to wear the golden chain of love, kneel at the hymenial altar, and become THE MOTHER OF MANKIND.

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## PART II.

### REVIEWS AND EXTRACTS.

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#### ARTICLE I.

*Rhinoplastic Operation, communicated to the Boston Medical and Surgical Journal, by J. MASON WARREN, M. D.*

THE history of the patient who was the subject of this operation, we shall give very briefly, as follows:

J. T. 28 years of age. Three years ago last spring, while playing very roughly with one of his companions, he received a violent blow on the nose, which dislocated the cartilage, driv-

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\* Parr.

ing it at the same time over to the left side. Some inflammation came on in the nose at the time of the accident, which very shortly subsided; and as he was out of town, and at a distance from medical advice, nothing was done to replace the cartilage, which remained in the situation into which it had been driven by the blow.

In the following spring, while pursuing his ordinary occupations, a small red spot appeared on the right cheek just below the eye; this very soon increased in size, the inflammation gradually spread, first attacking the lip, and from thence extending to the nose, which became red, swollen, and finally ulcerated.

It will be unnecessary to go further into the details of the case; suffice it to say, that in the course of eighteen months the whole nose, cartilages, septum, bones, &c. were successively attacked, and finally completely destroyed. The ulceration had also extended to the cheek of the opposite side. Subsequently to this, cicatrization gradually took place, leaving the patient in the state in which I saw him, six months after his recovery from the disease.

At this period, having accidentally come across a description of the Taliacotian operation in an old magazine, he applied to know whether anything of a similar kind could be done to remedy his frightful deformity. The following was his state as he appeared on the first examination.

The nose, as described above, had entirely disappeared, leaving in the place it originally occupied an opening about an inch in diameter, bordered by a firm cicatrice; the septum of the nostrils was destroyed, and the two nasal cavities thus thrown into one; externally a small cicatrix descended from the lower and left edge of this opening to the angle of the mouth. In the course of the disease the four front teeth had been lost, and this, together with the absorption of the alveolar processes, had caused a sinking of the upper lip, which had fallen an inch below the level of the lower one. An opening also existed between the lip and upper jaw, through which a probe might be passed from the mouth into the nasal cavity. The sense of smell was quite lost, and he was subject to an occasional running of the tears over the face, arising undoubtedly from the too sudden contact of the air with the lachrymal ducts.

A thorough examination of his case having been made, and finding there was no positive obstacle against the possibility of the success of an operation, the difficulties of such an operation as would be required were distinctly stated to him, the improbability of its succeeding so as to restore the organ in such a manner that the deformity should not be known, that the new nose might become very much flattened, and perhaps on the appearance of cold weather gangrene might take place, and



finally, that even his life might be endangered by it. I felt it my duty to state the case plainly, having seen all these accidents occur from the operation, and death in two cases being the consequence, from severe erysipelatous inflammation of the scalp.

Notwithstanding all these objections, he said that he was ready to incur any risk which would give him the least chance of having the deformity under which he labored obviated, as life in his present state was hardly desirable.

His case was certainly a hard one. A young man in the prime of life, in other respects of a good face and appearance, was, by this frightful calamity, not only entirely cut off from society, but prevented from gaining the means of subsistence.

Having determined to submit himself to an operation, it was thought expedient to delay it a few weeks, in order to watch the case a little, and prepare him for it by a course of diet and regimen.

At the end of six weeks his health had materially improved, and as he still persisted in the determination of having an operation performed, preparations were made to do it as soon as possible, as on account of the approach of cold weather, no time was to be spared. At this period he was seen by my friend Dr. Peace, of Philadelphia, who was present with me at one or two operations of the kind practised by Dieffenbach in Paris, and he declared, as his opinion, that the appearance of the patient offered every chance of success. The favorable circumstances were—the healthy state of the integuments surrounding the opening of the nasal fossa, the great height of the forehead, the whiteness and delicacy of the skin, and, added to this, the good state of his health. All the preparations having been made, the operation was performed on the seventh of September.

A piece of pasteboard, cut in the shape of the letter V, that is, of a triangular form, and with a projection from its base, corresponding to the columna of the nose, was placed upon the forehead, and a trace made around it with the nitrate of silver; this being used in preference to ink, as recommended by LISFRANC, in order that it might not be liable to become effaced by the blood. A trace was also made around the opening of the nasal fossa, at the points where it would be necessary to remove the integuments for planting the new skin taken from the forehead. This was done the night previous, in order to prevent any undue delay on the day of the operation.

All unnecessary articles of clothing being removed, the patient was placed on a table in a recumbent position, his feet towards the window, and the operator behind so as to have the full command of the head. The traces made by the nitrate of silver were about two thirds of an inch apart between the eyebrows, each side of the triangular portion of skin was three inches

and a quarter in length, with a base of three and a half inches, and the projection for the columna of the nose, which was to be taken entirely from the scalp, previously shaved, was an inch and a half long and two thirds of an inch wide.

The head being firmly supported by two assistants, the incision was commenced between the eyebrows, and the flap of skin dissected up so as entirely to isolate it from the skin of the forehead, except where, for the purpose of nutrition, it was left adherent at the root of the nose. The incision on the left side between the eyebrows was extended a little farther down than on the right, the better to facilitate the twisting of the flap. This incision included the skin, subcutaneous cellular tissue, and a portion of the occipito-frontalis muscle, care being taken not to raise the periosteum, from fear of necrosis.

The flap thus dissected and twisted round to the left side, was carefully wrapped in a compress of linen cloth, and before the the operation was proceeded farther in, attention was given to diminish the large wound made in the scalp. Little hemorrhage had taken place, and the temporal arteries which had been cut, very soon retracted and ceased bleeding. The angles of the wound were first brought together by the twisted suture, two pins being employed on either side. Its edges between the eyebrows were also approximated in a similar manner; by this means the wound in the forehead was diminished at once to less than half its original size; it was still farther reduced by the use of a few strips of adhesive plaister, and a little scraped lint filled up the remainder of the wound. Some lint spread with cerate was spread over the whole surface, a pledget, and the whole secured by a bandage round the head.

The next object was to fix the borrowed skin in its place. In order to do this, it was necessary to freshen the borders around the opening of the nasal fossa, the traces of which, as stated above, had been previously made with nitrate of silver. For this purpose a short narrow knife, somewhat similar to a cataract knife, was used, and a strip of integument a third of an inch in breadth, removed, including all that portion which had been at all indurated during the cicatrization of the ulcerations.—The knife was also passed between the lip and upper jaw, in which existed, as before stated, an opening large enough to pass a probe, and the adhesions between the two, for the space of an inch, entirely cut away. This was done for the double purpose of giving the columna of the nose a more deep and firm adhesion, and, in the inflammation which would subsequently ensue, to close up the unnatural communication between the mouth and nasal cavity.

The flap was now brought down into its place, its angles a little rounded with the scissors, the better to simulate the alæ of

the nose, and the whole secured in its place by pins and points of the interrupted suture. From that portion of the skin which was to form the columna of the nose, the epidermic side was pared a little, so that it might form an adhesion not only underneath to the jaw, but on its sides to the quadrangular wound made for it in the upper lip.

A little scraped lint was now placed under the ends of the pins, and a strip of oiled lint introduced into each nostril to prevent adhesion; another strip was placed upon the nose to preserve its temperature. The dressings were secured by a band of adhesive plaister fixed to the forehead above, and partially divided in the middle, so that it might descend on each side of the nose to the lip.

During the whole of this long and painful operation the patient kept up his courage, and not a cry was uttered, nor the least struggle made that could at all impede the motions of the operator. Not much blood was lost, and his strength was so little exhausted that he was able to run up stairs to his chamber. He was ordered to go to bed immediately, to keep perfectly quiet, and a watcher left with him, who had directions, in case of his falling to sleep, to prevent him from either rolling over on his side, or raising his hand to the nose so as to derange the dressings; also to wake him immediately should he breathe through the nose. To have arrow-root or gruel and lemonade, for nourishment.

On visiting him in the afternoon he was found comfortable; the new nose was warm, and had bled a little from the edges which formed the nostrils, both showing the circulation was not at all impeded.

Sept. 10. Passed a good night, slept well, pulse seventy-nine, complains of no pain, the nose of about the natural temperature. The gentleman who watched with him thinks that the lint on the right side of the nose was occasionally raised a little during expiration, when the patient slept soundly; he awoke him once or twice on this account. A purgative was ordered of the sol. sulph. Magnes. and liquid farinaceous diet. A piece of cork was confined between the teeth, so as to keep the mouth open, it being hoped that this might prevent him from closing his lips during sleep and breathing through the nose.

11th. Quite as well, passed a quiet night, has a good appetite, pulse eighty. Watcher says that he occasionally made a motion to raise his hand to the nose, but, as if instinctively aware of the impropriety of it, withdrew it again without touching the dressings. The introduction of the cork into the mouth had entirely effected its object, by preventing the passage of air through the nose.



12th. The first dressing took place four days after the operation, and the following was found to be the state of the parts.

The dressings on the forehead, after being well soaked, were first removed. The angles of the wound were found to have united throughout, so that two of the pins were at once dispensed with. Union had also taken place in its lower part, just above and between the eyebrows; the remainder of the wound, that is, its central part, in which union by the first intention could not take place, was suppurating well, and filled with healthy granulations.

The nose was next attended to. Upon the lint being removed, which had become very much hardened and caked in by the coagulated blood, it was found that entire union had taken place on both sides. The alæ of the nose and lower edges could not easily be seen without making use of too much violence in removing the dressings, which at present was not thought necessary. The columna was curved inwards, and the sutures concealed. The nose was of the natural color and temperature, and the circulation through it seemed uninterrupted.

Two strips of lint dipped in oil were laid over the cicatrix on each side of the nose, and no other dressings used. The patient was allowed to sit up a little, and to take any article of food of the liquid kind he might fancy.

On the 13th he was quite as well, with the exception of a little œdema of the upper eyelids, arising, undoubtedly, from the pressure of the bandages and other dressings on the forehead. One of the pins was removed from the forehead on the 13th, and another, the only remaining one, on the following day. The dossils of lint which had been placed in the nostrils still remained there, firmly caked in by the drying of the pus, blood, &c.—These were not removed until the 16th, when their places were supplied by two pieces of hollow sound. Some difficulty was found in the introduction of the tube into the right nostril, which had become partially filled with granulations.

On the 14th a quantity of hair began to appear on that portion of the skin forming the columna of the nose, which, as will be remembered, was taken from the scalp; this hair, from time to time, required to be removed with the scissors. He was put upon a nourishing diet, with the caution to use the jaws as little as possible. He stated that occasionally, when he swallowed, he had a sensation as though he would “swallow his nose.”

15th. The remaining pins were removed from the side of the nose, and the two sutures which confined the alæ; and on the 17th, ten days after the operation, the two ligatures, which confined the columna in its place, were also removed.

At this period, the following was the state of the parts. The wound in the forehead, from the adhesion by the first intention

which had taken place, and subsequent contraction, had diminished to a third of its original size, and the small triangular space which remained, together with that portion of the scalp from which the columna of the nose had been taken, was filled with healthy granulations. From the wound to the root of the nose was a linear cicatrix two inches in length, and continuous with the cicatrix on the left side. Adhesion of the integuments had taken place on both sides of the nose; at the right alæ, however, the union was not quite so perfect as at the left; that is to say, the whole thickness of the skin did not appear to have united.—To assist the union, the skin of the face which lay under it was slightly scarified with the point of a lancet.

The columna of the nose was a little curved backward, and its edges had retracted inwards upon themselves. The inside of the nose was suppurating well, and at its upper part adhesion seemed to have taken place between the two bleeding surfaces which had been opposed to each other. The tip of the nose was well defined, and its edges were curved inwards so as well to simulate the natural appearance of the alæ, and just above the alæ, apparently from atmospheric pressure, a depression was taking place, forming their superior boundary. This was assisted by the patient making an occasional pressure with his fingers at these points. He feels well, has a good appetite, and sits up all day. He breathes freely through the tubes placed in the nostrils, which require to be daily removed in order to clear out any obstructions which may collect in them.

At the end of a month the wound in the forehead had contracted to about a quarter of its original size. Adhesion of the nose was perfect at all its points. The openings of the nostrils were regularly rounded, and simulated well the natural appearance. The tip of the nose is well preserved, and a regular curve takes place from its root to the end of the organ.

At the end of six weeks he was able to go out and walk about during the evening, but as the weather became cold he was advised to confine himself to the house, as cold evidently had a very great effect in retarding the cicatrization of the wound in the forehead. By reference to the second figure on the plate which accompanies this paper, a pretty correct idea will be formed of the state of things six weeks after the operation.

At the end of two months it was thought time to proceed to the second operation, which was required to remove the twist existing at the root of the nose. It will be easily conceived by referring to the plate, that underneath the pedicle which connected the nose with the forehead, a small portion of sound skin existed, and that of course no adhesion had taken place between this portion and the pedicle lying over it. The method usually adopted by operators has been to cut the pedicle, after sufficient

union of the nose has taken place below to justify the separation of it from its source of nutrition, and to fix it down at the root of the nose, in a transverse incision made for it at that point.

To this method there are some serious objections. First, the danger of inflammation in separating the pedicle; second, of sloughing of the organ on the vessels being cut which have hitherto supplied it with blood; and lastly, the very perceptible transverse cicatrix left after the operation. The method resorted to in the present case is liable to none of these objections, except, perhaps, in the first one, in which the danger is much diminished.

This operation was as follows. An incision was made, commencing at the internal angle of the eye, and extending to that part of the base of the nose where adhesion had not been able to take place; a corresponding incision was also practised on the pedicle. The skin being well dissected up from its adhesion, a small portion of integument was removed from the upper angle of the wound, where it had become wrinkled from the twist in the pedicle. The edges were brought together by three points of the interrupted suture. The same operation was to be performed at a future day on the other side, where, however, the opening was of about half the size, and not so perceptible.—Union took place, throughout, by the first intention. Some trouble was experienced, however, by the formation of a small abscess in the new cicatrix, which suppurated and discharged itself.

The third drawing, executed four months after the operation, when the cicatrization had become complete at all points, gives a very good idea of his present appearance. He now declares himself entirely well, no secretion takes place from the nostrils, and on looking into those cavities a new skin is found to line them throughout. The nose itself has contracted gradually, so that by the first contraction of the integuments, and the subsequent contraction from suppuration, it has decreased to almost two thirds the size of the flap which was taken from the forehead. Contraction also seems to be going on in its longitudinal axis, so that the distance between the tip of the nose and the mouth, daily increases. This will be much more perceptible, and the whole physiognomy of the nose much improved, when the four front teeth, which have been lost, are replaced. This will bring out the under lip, and at the same time raise the tip of the nose. The cicatrix in the forehead has become very small, and is gradually assuming the color of the surrounding integuments. The scalp from which the columna was taken is lost in the hair. The nose is quite firm, of a good form, and the cicatrix on each side hardly perceptible; at the root of the nose on the left side, and at that portion which formed the pedicle, a



small fissure still remains, which is for the present, concealed by a strip of court plaster.

The health of the patient has never been better, his sense of smell is returning, and the tears no longer run over the face, and he, as well his friends, congratulate themselves both on the moral and physical effects of the operation. He is now able to make his appearance during the daytime, which he has not done before during the last two years, and no person would observe anything remarkable in the nose, without a minute examination, when it would be difficult to explain the remarkable anatomical changes which have taken place.

*Remarks.*—In an operation like the present, of comparative rarity in this country, it will not perhaps be considered amiss, if a few remarks are offered on some of the most interesting points connected with its history, and of the chief difficulties which may occur to prevent its success.

The operation of Rhinoplastie is originally of very ancient date. For various reasons, however, it had fallen into most unmerited disrepute until of late years, when it has been again revived in Europe by the brilliant successes of GRAEFE, DIEFFENBACH, and LABAT on the Continent, and LISTON in Great Britain. DIEFFENBACH, in his late visit to Paris, where, with the accustomed liberality of the French, all the hospitals were thrown open to him for practising his celebrated operations for the restoration of parts, has, perhaps, done more than any other operator towards giving it its proper standing in surgery.

In the most ancient operations of this kind, the lost organ was restored at the expense of the integuments in its immediate neighborhood; advantage being taken of the extensibility of the skin of the cheeks, the integuments were dissected up on both sides of the nasal fossa, brought forward, and united in the centre by points of the interrupted suture. In case of the extensibility of the integuments not being sufficiently great, incisions were made on both sides in front of the ears, so as to diminish the tension of the skin at these parts, the wounds thus made being afterwards allowed to fill up by granulation. This operation, however, did not, as will be easily perceived, restore the form of the lost organ, and the only advantage gained was a flap of skin to cover the existing deformity.

The operation which was afterwards adopted, and which at present bears the name of the author, was that of Taliacotius, which consisted in taking the skin required, from the arm, or, in some cases, from the body of another person. The given shape of the nose being marked out on the place determined upon, the flap was dissected up, except at its base, and the integument thus taken was confined in a place prepared for it around the nasal fossa. In this operation, it was required that the arm,

in case it was taken from that part, should be confined in contact with the face, for the space of ten or fifteen days, or until union had taken place; and it was not until then that the arm was released from its situation. The disadvantages of this method are at once manifest; the length of time required to keep the limb in this painful situation, so as in some cases to produce partial paralysis, and the danger that ensued in the too early separation of the transplanted skin from its source of nutrition, were, of themselves, reasons of sufficient weight to cause this method to fall into disuse.

The operation which has attained the most celebrity, is that which goes by the name of the Indian Method, in which the flap is taken from the forehead. This has been most frequently practised in France and England, and it is this method, which, it will be perceived, has been adopted, with some modifications, in the present case.

Having thus briefly referred to the history of the operation, some remarks will now be made on the chief difficulties which occur in the course of it, and the means taken to obviate them.

No operation, perhaps, requires more attention to the nice points of detail, than that now under consideration; and it is on these that the ultimate success of the operation, in a great measure, depends. For information on this subject, we cannot do better, than by referring to the work of M. LABAT, one of the most valuable monographs on rhinoplastie for reference yet published. The author, after having referred to the occasional trouble which he experienced from hemorrhage while dissecting up the flap of skin from the forehead, goes on to state, "But an inconvenience much more embarrassing, and to which it was necessary to be resigned, from the impossibility of remedying it, was occasioned by the great quantity of blood, which, entering the throat, was violently expelled from the mouth every time that the pain of the operation forced the patient to cry out. But what was much more troublesome still, was its being repeatedly received in my eyes, so as once or twice to oblige me to discontinue the operation for the space of some seconds."

The difficulty which the author here complains of, was remedied in the present instance by a very simple means. Instead of placing the patient in an upright position, he was made to lie upon his back on a table, the operator behind him; the blood was thus conducted off on each side of the face, instead of passing over the nasal fossa and mouth, and entering the throat.—To guard against any possibility of this accident taking place, plugs were confined in the opening of the nasal cavities, during the dissection of the flap, and the time occupied in closing up the wound on the forehead. When the operation was commenced

around this opening, and the entrance of the blood was unavoidable, the patient, who maintained sufficient coolness throughout, was requested to keep the blood as long as possible in the mouth, and an assistant directed to clear out, with a small sponge, what had collected, as occasion required.

We give the account of another trouble, in the author's own lively description, which, fortunately, was avoided in the present instance.

"But an accident of much more gravity, and which placed me in a very critical position, presented itself at a moment, when, after having detached from the forehead the flap of integument, I was about to bring it down into the place it was destined to occupy. Previous to making this twist of the new flap, it was thought necessary, as I have before stated, to prolong the incision on the left side as far as the medium line of the root of the nose, in order to facilitate the torsion of the pedicle; the patient experienced, at this moment, such a violent pain by the inevitable division which it was necessary to make of some of the ramifications of the frontal branch of the ophthalmic nerve of Willis, that he escaped from the hands of the assistants, rushed towards the door, and was determined not to undergo the remaining part of the operation. At this moment, the physiognomy of L. presented a most frightful aspect; his forehead covered by a large wound, the borders of which, retracted by pain, had greatly augmented its extent, and all the rest of the face, his neck, and garments, inundated with blood. But a sight which was much more horrible to behold was the flap of palpitating integuments, which at every moment were jerked from one side of the face to the other."

In the present instance, no particular suffering was observed by the extension of the incision down between the eyebrows; and in case of any difficulty of this kind, the complete command in which the patient was held, from the position adopted, would have prevented any of the evils complained of by M. LABAT.

One of the greatest difficulties of the operation, and that which, in its consummation, occupied the most time, was the passing of the pins which were to close the wound in the forehead, and to confine the new nose in its situation. To remedy this as much as possible, the pins to be employed, which were the long pins, generally used by naturalists, were previously sharpened; and for introducing them, a little instrument was constructed, somewhat similar to the aneurismal forceps of Dr. PRYSICK, made with a small groove to receive the head and upper third of the shaft of the pin. With this instrument the pins were readily seized, and pushed through the skin, and the ligature being applied, their ends were cut off by the scissors or cutting pliers.

At that part of the flap which was to simulate the *alæ* of the



nose, as it was necessary that the integuments should be directed inwards, the pins, of course, could not be used, and here a plan recommended by M. LABAT was adopted, which was followed by partial success. A thread being passed first through the integument of the face, and then through the flap, at about two lines distant from the edges, the ligature was so tied as to produce, as it were, a fold at that point; and the better to effect this object, a small piece of adhesive plaister, rolled up into the form of a cylinder, was confined under the threads, so as to make a strong compression on the wound and to force the edges into their places. This succeeded completely on one side; on the other, however, the union, at first, was not so entire, the skin adhering only by about half its thickness.

During the whole of the treatment, it was necessary to keep the openings of the nostrils distended by small tubes. The substance which seemed to answer the best for this purpose, was a portion of the barrel of a quill; the end which was to remain in the nose, being stopped up with a little melted sealing wax, and a small aperture cut in the side through which the air could freely pass. These were ingeniously constructed by the patient himself, who, after a time, was able to manage them without difficulty. The tendency to contraction at these points was very great, so that at one period, the tubes being left out during the night, it required considerable force to replace them.

From the new nose being formed entirely of skin, it will perhaps be supposed, that the integuments composing it are flaccid, and the form of it easily destroyed. This, however, from reasons easily appreciable, is not the case. The integuments of the scalp being naturally of great thickness, by the suppuration which took place from the inner side were made to assume a firmness almost similar to fibro-cartilage; and at the root of the nose, the internal surfaces coming in contact, contracted adhesions so as to make the nose perfectly solid at that part. The size, also, of the columna, which doubled upon itself and contracting deep adhesions during the inflammation which took place, forms a round and solid pillar to support the tip of the nose.

Great precautions had been taken to guard against exposure to the cold, which, by stopping the circulation, might at once defeat the whole object of the operation. As soon, however, as adhesion had taken place, it was perceived that no danger from this source was to be apprehended; and although during the winter he has slept in a room in which water has frequently frozen, and has been since repeatedly exposed during some of the coldest days, he finds that the temperature of the organ is never greatly diminished.

The cicatrization of the wound in the forehead was greatly retarded by the cold weather, and less than half the time would

have been required, had the operation been performed during a warm season; when it had diminished to a small size, and cicatrization, as frequently is the case in the filling up of large wounds, seemed to have been arrested, great benefit was found from the use of an ointment composed of six drops of creosote to an oz. of simple ointment. On the application of this to the wound, the effects were at once apparent. A small pellicle formed over its whole surface, which was shortly replaced by a firm, consistent cicatrix.

In one or two cases operated upon by DIEFFENBACH, much swelling took place in the new formed nose the day after the operation, arising from the difficulty of the blood, which had entered by the arteries, being conducted off by the veins. In one case the nose became so enormously distended, that it was feared the adhesions would be entirely destroyed, and it was only by the repeated application of leeches, 70 or 80 being employed in the course of 48 hours, that this danger was finally avoided. In the present case, from the extension given to the incision on the left side, care being taken that traction should not be made too forcibly on the part, so as to compress the pedicle at its base, the circulation was, from the first, unobstructed.

In the account of the foregoing case, it has been attempted to bring forward some of the most important points which might be of service as a guide to future operators; and if the author has been so fortunate as to throw any new light, however small, on the operation, he will feel that he has rendered a service to science and to humanity.

*Boston, March, 1837.*

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## ARTICLE II.

### BRONCHOTOMY.

THIS operation was successfully performed in December last by Dr. CALVIN JEWETT, of St. Johnsbury, Vt.\* The necessity for the operation was caused by the lodgement of an eight-pen-

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\*Boston Medical and Surgical Journal.

ny cut nail in the right bronchia, below the bifurcation of the trachea. The subject was a child three years old.

The symptoms manifested by the patient from the time of the accident had been frequent irritative cough ; sometimes, though seldom, approaching to suffocation. He continued to run about the house and out at the door for two or three days ; his cough and difficulty of breathing becoming now more urgent, it was concluded he had taken cold. His appetite failed him from the day of the accident ; and though he could now and at all times swallow either fluids or solids without the least difficulty, his principal diet was milk. Once, and once only, he had puked."

This accident occurred on the evening of the 10th December. "Now," says Dr. JEWETT, "full nine days since the accident, he is cheerful, though unable or unwilling to walk ; pulse one hundred in a minute, breathing a little hurried, tongue clean, has frequent paroxysms of coughing, which last from a few seconds to one or two minutes. Breathing, or disposition to cough, not affected by posture, yet he chooses to have his head elevated, and to recline only on the right side. Sleep is frequently interrupted by coughing. Cathartics, expectorants and anodynes had been presented by Dr. BROWN, the attending physician. Though very intelligent for his years, he complains of no pain, and when definitely inquired of, he acknowledges no pain or disagreeable sensation in any point you refer him to. Placing the hand over the region of the right lung, either anterior or posterior, it gives a sensation like crepitus ; to the ear it communicates a peculiar hissing sound, neither of which can be heard or felt over the left lung. These sensations were communicated both sleeping and waking, yet more distinctly when coughing."

Drs. JEWETT, BROWN, NEWELL, and SPAULDING, the whole consultation, concurred in the opinion that the nail had passed into the trachea, and not into the œsophagus ; and that it was below the bifurcation of the right bronchia.

December 21 (continues Dr. JEWETT,) I was again called to Mr. B.'s, where I met Drs. Brown, Spaulding, Alexander and Densmore. The little boy's strength fails ; he has become restless, and much more irritable than when I saw him before, not willing to have his pulse taken or to submit to any examination. All the physicians agreeing in opinion, the parents decided to have the child submitted to the operation.



Being provided with a pair of long and very small forceps, made expressly for the purpose, of soft iron that could be bent to any desired curve, silver wire in loops, and all the variety of instruments which it was thought possible might be needed, we proceeded to the operation. On a table of convenient height, suitably covered, we placed the boy, his head being bent over a fold of cloth, and projecting beyond the table. From the bloated state of the neck, the smallness of the trachea, and the enlarged veins, the direction of some being such that they could neither be avoided or pushed to one side, some two or three ounces of blood was lost, and one ligature had to be applied. A long time was occupied in making the dissection and opening the trachea, of which three or four rings were divided down as low as possible.

Should I say we were near one hour from the time of placing our patient on the table, until I cut through the trachea, I should not be far from the truth. Let those who think it a very easy matter, and quickly to be done, once have the trial on the *little* living subject, who has been breathing with difficulty, and coughing nearly to suffocation for ten or twelve days, and after such a trial they may speak with more certainty.

Not expecting the nail would be forcibly ejected, as may be the case with light substances, a blunt probe was introduced down into the right bronchia, and the nail distinctly felt at the depth of about four and a half or five inches below the top of the sternum. I now tried the forceps, but before I could fix on the nail, the spasmodic action was so severe as to threaten immediate suffocation, and I was compelled to desist and withdraw the forceps. Again and again I tried the long forceps, other forceps, the wire loop, &c. but tried in vain. Drs. Alexander and Spaulding ably seconded my efforts, and more than once and again tried with various forceps and instruments, and with the like result.

Near two hours had now passed since the little boy was placed on the table, having been raised up frequently to take his drinks. During the whole process he made no resistance, and never cried, though often threatening to tell pa if we would not let him alone.

Our patient now appeared much exhausted, and we desisted from any further attempts to remove the nail, for one hour, during which time he rested quietly and slept some. We again made repeated trials to remove the nail, but without effecting our purpose, and were compelled, most reluctantly, to say we could not remove it; painful and humiliating as was this avowal, make it we must.

When the opening was made into the trachea, considerable viscid mucus was thrown out through the wound; and the night following, I tarried with him and found his breathing much freer than before; he coughed less, and rested better than usual. The dressings applied were simply strips of adhesive plaster.

I now leave the history of this case, December 24th, expecting to learn, in the course of a few days, of his death, and the dissection, which will show the exact situation of the nail.

*Sequel to Bronchotomy.*

Under date of Feb. 6th, I received from Esquire Belden the history of his son's case from the time of the operation down to date.

He says, "The air ceased to escape through the incision in thirty hours, and his breathing continued better than before the operation. About the 20th of January he had the appearance of having taken a cold; his cough became more troublesome, with much phlegm. On the morning of January 23d, about 6 o'clock, his cough was still more severe, giving a different sound from that of any time previous; it was harsher, sharper, and resembled the barking of a fox. I hastened to light a candle, but before I could do this and return to the bed, William says, 'Pa I have coughed the nail up.' I stepped to the bed with my light, and in a streak of phlegm and blood lay the nail, directly before his mouth on the pillow, the head from him. I viewed it attentively before touching to see if I could discover any matter (pus,) but saw none."

Since the above date of February I have seen both father and son; the boy appears well and hearty, his cough has entirely subsided, unless when he is much irritated, he coughs a little. Contrary to what was the fact before, he now, since raising the nail, lays on either side, or on his back, with equal ease, and his head low; whereas, before, he could lay only on his right side, his head very high, or occasionally for a short time he would lay directly on his face.

That there is not a similar case, as it regards form, weight, &c., of a child so young, having received such a weight into his lungs, and thrown it up by coughing, I will not venture to assert, but if such a case has occurred, it has escaped my notice if reported.

A few practical inferences may perhaps be drawn from the foregoing case, and its, thus far, result.

Various instruments may, again and again, and repeatedly, for the space of one whole hour, be introduced through an artificial opening in the trachea, into the lungs, or rather into the bronchial tube, without taking life.

It shows that a substance of most unpromising form, and great weight (in reference to its bulk) may be thrown up by coughing.

It further confirms the safety, and *expediency* (because of its safety,) of the operation when light substances are received into the trachea, which being easily moved by air, would more likely produce immediate suffocation if remaining, and are almost certain to be removed directly, when the operation is performed.

## ARTICLE III.

*Cæsarian Operations, followed by success both for the Mother and Child.*

The following cases are of great interest, as they are fairly calculated to assure us of a degree of safety not generally accorded to this operation in England and America. They also cite our attention to the cause of the frequent ill success which has attended them, and consequently enable us to avoid that cause, if we have the tact and decision which should belong to every surgeon-accoucheur. The compiler of these cases, VENDERFUHR, has shewn us that in these cases of signal success, the operation has been performed early in the case, whilst the greater fatality of this operation in England he very reasonably ascribes to the delay of several days, during which the powers of the patients have been "exhausted by useless parturient efforts." This promptness cannot, however, be safely used without that thorough knowledge which is necessary to enable the operator to decide *absolutely and correctly* too, on the necessity of this operation *by the facts which render it necessary*, without awaiting the result of a long and unsuccessful labor to prove its necessity. We are, however, thus far, fortunate in the less frequency of its necessity in America than in England, or on the continent. And this good fortune Americans will continue to have, until the American race is still farther deteriorated by luxury and vice.

1st. *Case by Venderfuhr*.—This is the third time, says the author, that in a practice of 18 years, I have had occasion to perform the Cæsarian Operation, and each time with success. The two first cases are contained in the *Magasin de Rust* of 1823.—In this, as in the other two cases, the operation was indicated by the narrowness of the pelvis, and was performed at the instance of the mother. As in the other cases also I selected for the mode of the operation, the incision on the linea Alba, which I consider the easiest and most advantageous.

GERTUDE HOLZAPFEL, aged 24, born of healthy parents, was raised in extreme poverty. Affected with scrophula and rachitis she did not begin to walk until the age of nine. Her general health, however, was tolerably good, and the catamenia appeared when she was 18 years of age. She became pregnant for the first



time in her 24th year. Her pregnancy passed pretty well, and even during the last days she walked about seeking charity.— On the night of the 20th April, pains commenced, and I was called on the 21st, near noon. I found the unfortunate patient in a miserable hut, clothed in rags and reposing upon straw. She was small, her limbs but little developed, the legs much curved. She presented all the signs of the rachitis that had existed. By external measurement, I found eleven and a half inches between the great trochanters, and the antero-posterior diameter to be six inches. By the touch, the index finger soon discovered at the left a projection which the midwife had at first taken for the head of the child, and which in reality had with the latter a deceptive analogy. This projection was formed by the promontory. The distance between the latter and the internal face of the symphysis pubis could be easily filled by the index and middle fingers; so that the antero-posterior diameter which, according to the external measurement would be three inches, was reduced to two and a half in consequence of the projection of the promontory.— The right side of the pelvis presented a greater width, but not however sufficient to admit the foetal head. The deformity was increased because the horizontal rami of the pubis were more elevated than the promontory. The head reposed upon the latter, the neck of the uterus was dilated, the membranes were ruptured. Sanguinolent mucosity existed in the vagina. The pains were intense, and the violent motions of the foetus established its vitality. These circumstances induced me to propose the Cæsarian operation, which received the sanction of some professional brethren.

After having first emptied the bladder and rectum, I made an incision of five inches upon the linea alba, and soon perceived at the bottom of the wound the reddish blue colour of the uterus, A small incision was made in this organ at the place which seemed most suitable, and enlarged by cutting upon the index finger until it was four and a half inches in length. The placenta was not touched, so that the effusion of blood was inconsiderable. The child, which presented its back towards the wound, was easily withdrawn, and by its cries proved its vitality. The after birth was delivered with difficulty, as the introduction of the hand and the separation of the placenta were embarrassed by the contractions of the uterus. I prevented the escape of the blood into the abdomen by applying the abdominal parities accurately against the surface of the womb, and thereby prevented also the protusion of the intestines, but not that of the omentum; a portion of which escaped during a convulsive paroxysm of cough. Having reduced this part, I united the wound by the twisted suture and strips of diachylum plaster in the intervals. The operation was protracted by vomiting which occurred seve-

tal times. The wound was covered with dry charpie and compresses, and the whole kept in place by a bandage around the body. The night passed without sleep, but without any other accident except vomiting, which recurred several times during the first hours after the operation. The next morning the abdomen was neither swollen nor painful, the locheal discharges flowed regularly. The patient urinated twice without pain; the pulse had but little frequency; thirst moderate, tongue clean and humid; the skin moist. Towards evening some fever and pains in the abdomen supervened, but these accidents subsided and were followed by some hours of repose. The following days the fever was only of moderate intensity, no sanguine depletion was necessary, although the abdomen was slightly swollen and painful. The fifth day some diarrhœa supervened, and required the administration of opiates. The same day I removed the dressing and detached the point of the suture. The wound had united in its superior third; it was slightly open at its inferior part, from which a considerable quantity of fœtid secretion escaped. This secretion continued for some time; the wound cicatrised slowly, a circumstance which I believe to be advantageous, because it prevents the accumulation of the secreted matter. The lochial discharge, so important in cases of this kind, continued more than a month. Fifteen days after the operation the fever had entirely disappeared. From this period the patient began to recover rapidly. Sleep and appetite returned, and at the end of two months, the mother and child were enjoying perfect health. With regard to the latter, I may remark that for fifteen days we entertained serious apprehensions of its safety. Born in perfect health, it took the breast the second day as soon as the secretion of milk was established; but the milk of the sick mother, though of good aspect and taste, did not agree with it. It was troubled by vomiting and diarrhœa, the mouth was filled with aphthæ, a great part of its body was covered by excoriations, and a frightful emaciation ensued. We were obliged to have recourse to artificial lactation. As the diarrhœa persisted, we employed broth with yolk of eggs, and some mucilaginous remedies. These means succeeded—the child recovered its strength, and at the end of three weeks was again put to the breast of its convalescent mother.

2d. *Case by Meyer.* To the above case we add another of Cæsarian operation, remarkable for its success, in a woman debilitated by previous disease, and whose case seemed desperate.—We regret that the author has left us in doubt, which diminishes the interest of the case, as he only remarks that the child was alive when taken from the womb, without informing us whether it continued to live.

The wife of a shoemaker, aged 38, who had been healthy in her youth, had suffered for two years with rheumatic pains, and for the last year had scarcely left her bed, and could walk only when supported by crutches. She became pregnant, and in the evening of June 19 was seized with the first pains of parturition. The deformity of the pelvis, in consequence of the rheumatism, appeared to require the Cæsarian operation, and the author being called in, visited the patient in company with two surgeons.

The patient was in the most unfavorable circumstances; her abdomen much developed, was covered by an eruption; the inferior extremities were swollen up to the genital organs, and a painful cough, nausea and vomiting existed. The pubic and ischiatic bones were so much curved inwardly, that the finger could with difficulty reach the promontory advancing to the symphysis pubis.

The 20th June the operation was proposed and accepted as the only means of safety. The patient was placed upon a table covered with cushions; the thighs could scarcely be separated sufficiently to leave a free passage to the hand, and in consequence of an anchylosis between the lumbar vertebre and between these bones and the sacrum, the trunk could not be extended. In this semi-sitting position the abdomen was in near proximity with the thighs. Notwithstanding this unfavorable circumstance, MEYER preferred the incision of the linea alba, because he had made it successfully in three other cases, because the lateral incision is accompanied by loss of blood which it is important to avoid in a debilitated patient, and finally because in the incision of the linea alba the wound in the uterus always corresponds better with that in the abdominal parieties. The patient having been arranged for the operation, and assistants suitably placed, the surgeon made an incision through the skin from the umbilicus to the symphysis pubis, embracing an extent of four inches, the linea alba and peritoneum were incised to the same extent, a great quantity of serosity, the result of an ascites escaped. The uterine parieties which the author had found thin in the proceeding cases, were firm, three lines in thickness and opposed some resistance to the instrument. The incision fell exactly upon the placenta, which caused an abundant sanguine effusion, and also diminished the space for the extraction of the child. The placenta was rapidly detached without producing hemorrhage, the child was found placed upon its back and presenting the right knee, the two feet were withdrawn, then the body, the arms, and finally the head, which offered some resistance. During all this time the uterus was kept fixed by an assistant. The blood and serosity were removed from the abdomen, and the uterus was seen to contract to twice the volume of the fist. The lips of the wound were brought



together by the twisted suture. It was kept open in the space of an inch above the pubis. Compresses were applied and maintained in place by a bandage. In half an hour the patient laid tranquilly in her bed. The child was alive, cried continually, but was feeble. Soon after the departure of the physicians, half an ell of intestine escaped through the wound, but was easily reduced, and the opening was closed by compresses and adhesive strips. The consequences of the operation presented no peculiarities. The inflammatory phenomena which supervened were only of moderate intensity, and were easily subdued, the locheal discharge was regular, and the wound suppurated but little. The patient soon took food and entered upon convalescence. The 15th July an inflammatory tumour appeared at the inferior part of the wound, an abscess was formed, and the wound which gave issue to pus, remained fistulous for some time. The 10th of August it was entirely cicatrised, and the patient completely cured.—*Repertorium de Kleinert*, 1836.

3d. *Case by M. Duchateau d'Arras.* STEPHANIE BRASSART aged twenty-two and a half, and forty-three inches in height.—All her extremities present the marks of rachitis. The vertebral column is very convex at its anterior part. The scapulæ, especially the right one, in near proximity with the pelvis.

This woman whose menstruation commenced at the age of 18, and continued regularly presented herself at the Hospice de la Maternité d'Arras to be bled in the 8th month of her first pregnancy. M. DUCHATEAU ascertained that the crests of the iliac bones were placed in the same line, and that the distance from one anterior superior spinous process to the other was eight inches nine lines; that the sacro-vertebral angle inclined towards the symphysis and a little to the right; that the superior strait had only two inches in its antero-posterior diameter. The 20th of April, 1836, this woman having arrived at the full period of natural gestation, returned to the hospital complaining of pain in the kidneys. No other phenomenon appeared until 24th, five o'clock, A. M. Then she began to experience more severe pains which succeeded each other, however, slowly. At six o'clock, the orifice of the womb presented itself turned to the right, and anteriorly with a dilatation of from ten to twelve lines. The membranes began to protrude, but no part of the child could be felt by the finger. (An enema and a general bath.) At nine o'clock she was in the same state. M. DUCHATEAU and his colleagues perceived the necessity of an immediate operation. A sound was introduced into the bladder, and this organ found to be empty. An assistant placed between the inferior extremities kept the womb fixed, while others exerted tension upon the abdomen. The operator, with a convex bistoury, made in the

skin an incision, which, commencing at two inches above the pubes, was directed in the course of the linea alba, passing a little to the left of the umbilicus, and terminating two and a half inches from this part. The different aponeurotic layers were incised in succession. The peritoneum was raised by the dissecting forceps and opened cautiously, and then divided in the length of the primitive incision with a straight probe pointed bistoury, directed by the index finger. The omentum which covered the uterus and intestines was raised and kept above the womb, as well as some coils of intestine, which the efforts of the patient had driven to the superior part of the wound. The uterus was found in the middle of the incision in the abdominal parietes. It was still kept fixed by an assistant, and an incision made in it with a slightly convex bistoury. The internal face of the womb being divided, a jet of black blood disclosed that the placenta existed at the place of the incision, which was dilated with a probe-pointed bistoury. The membranes of the ovum being exposed to view were then divided like the peritoneum, using, however, the necessary caution to prevent the liquor amnii from escaping into the abdominal cavity. The placenta was then detached to a small extent, and the child seen in the first position of the head. The legs were seized by the right, and the trunk by the left, hand of the operator. It was extracted from the womb and uttered its first cry. It weighed six pounds four ounces. In three minutes the uterus began to contract.—The umbilical cord and the membranes, the coagula and the fluids contained in the womb were removed. The index finger was introduced through the wound into the neck of the uterus, which was soft and dilated to the size of a five franc piece. The finger of an assistant introduced through the vagina, touched that of M. DUCHATEAU, proving that the fluids could escape, but that the promontory presented the projection which had led to the operation.

The uterus having contracted, the lips of the wound were united by three points of the quilled suture, the parts were washed with a decoction of mallows. Strips of Diachylum plaster were placed in the intervals between the sutures, and only a seton smeared with cerate was placed at the inferior angle of the wound. Charpie, compresses and a bandage completed the dressing. The operation lasted 20 minutes and was well borne. The patient was at first troubled by acute pain in the right iliac region, vomiting, and cough which were relieved by venesection, leeches, Cataplasms and mucilaginous drinks and enemata. The ninety-second day after the operation she had entirely recovered and the child was well.—*Presse Medicale* 1837, No. 7.

A case analogous to the preceding, by Professor STOLZ of

Strasbourg, is contained in the *Memoires de l'Academie Royale de Médecine*, vol. 5, p. 91.

*Cæsarian Operation repeated 4 times with success upon the same woman.* By M. E. Charlton, President of the Medical Society of Edinburgh. This case, which occurred in Germany, was seen by the author, who vouches for its truth. Cases have been cited in which the Cæsarian operation has been repeated six or seven times on the same woman, but these cases want the necessary authenticity and details to ensure entire confidence. The subject of the case in question was a small rachitic woman, whose pelvis was greatly deformed. The operation was performed for the first time June 18th, 1826; the second time 21st January, 1830; the third time 28th March, 1832; and the fourth time 24th June, 1836. All these operations were performed in public, and by different modes. The patient was well with the exception of some fistulæ at the place of the cicatrices.

The author gives the details of these different operations, and concludes by remarking that the Cæsarian operation has very often succeeded on the Continent, while it is almost always fatal in England; the English, says he, do not operate till late, when the strength of the patient has been already exhausted by useless parturient efforts for several days.—*Gazette Medicale*, No. 25, extracted into, from the *Edinburg Med. and Surg. Jour.*

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#### ARTICLE IV.

*Almost complete division of the Arm by a sabre cut, re-union, cure.* By M. STEVENSON.

The following is the most remarkable authentic case of re-union found in the annals of surgery:—

An Arab, ABDOO BRAHEEM, received a violent sabre cut in the arm, immediately below the external margin of the deltoid muscle, dividing obliquely all the tissues, the humerus and the entire body of the biceps muscle. The blood was projected forcibly to the distance of several feet. The assistants arrested the hemorrhage by exerting compression on the wound by means of a turban. Upon examination, M. STEVENSON ascertained that the arm was attached to the rest of the body only by a single strip of skin at the internal part; the brachial artery had been divided at the same time with the biceps muscle; the pulse at the wrist had disappeared entirely. His first idea was to complete the amputation: but this was opposed by the patient, and it became necessary to attempt the re-union, although but small pro



bability of success existed. Assisted by M. STEVENSON, M. PEARSON first desired to ascertain if the bracheal artery could be tied; this attempt was useless. A tourniquet was applied, left loose above the wound, and confided to an assistant with the injunction to tighten it if the hemorrhage reappeared. The wound was cleansed, the parts brought in apposition, and an appropriate apparatus with splints applied.

No hemorrhage—the pulsation at the fist imperceptible until the third day. At this period the pulse began to reappear very slightly, and became more and more sensible. The wound was perfectly cicatrised the 26th day, but the fracture had not yet united. The arm was kept in the apparatus until the 45th day; then the cure had been completed. The extremity, however, remained paralysed.

This case is worthy of interest; it leads to practical consequences of the highest importance. The reunion of a voluminous limb, like the arm, may then take place after the division of its principal arteries and nerves. The contrary, however, has been laid down as a principle a priori. DUPUYTREN had declared, (v. plaies d'armes de guerre,) that in the members whose vitality is confided to an unique source, (artery and nerve,) as in the arm and thigh for example, the reunion was impossible when this source was concerned in the injury. Besides, added he, what would become of the divided artery without a ligature? Thus he thought that the completion of the amputation was indispensable in this case. Reunion had, it is true, been attempted and obtained in an analogous case by LAMARTINIERE, but the bracheal artery and plexus had not been injured, which changes entirely the conditions of the lesion. The fact in question then proves the contrary of what had been presumed: reunion of the large members may take place notwithstanding the division of the principal vessels. The circulation may be re-established as after the operation of aneurism. Besides we can easily conceive how a large artery may be entirely obliterated.—*Gazette Médicale*, No. 25.

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### *Retroversion of the Tongue.*

M. CROSSE, in a speech at the fourth anniversary session of the assembly of English physicians, at Manchester, mentioned that he had known a young boy who could swallow his tongue without any inconvenience, and that he frequently repeated it with the greatest facility. A very curious case of retroversion of the tongue has been recently published. A physician was called to visit a young infant that had been suddenly taken with

alarming symptoms of suffocation. Upon examining the mouth, he discovered a retroversion of the tongue, whose point was engaged in the pharynx. It was easily returned to its proper place, but the accident recurred several times.—*La Presse Medicale*, No. 49.

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### PART III.

### MONTHLY PERISCOPE.

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#### *Case of Triplets and of Locked Heads.*

A case of this kind occurred in the practice of Dr. JOSEPH A. EVE, of Augusta, on the 24th of September last.

The woman was a delicate negress, aged about 35 or 40 years. Her health had been bad during the whole period of gestation, and particularly about the time of parturition.

The first birth was very easy and rapid; the child having passed, before the Doctor's arrival. He found the woman on her knees on the floor, leaning upon a chair, and the child suspended by the cord. As soon as he had made the ligature on and cut the cord, she was put to bed, and he found, upon examination, the feet of another child presenting. The labor progressed with the second child in this presentation until the body had passed as far as the armpits, when, in consequence of the pains becoming weak, and the fear of strangulation of the cord, the ergot was administered, with the effect of increasing the force of the pains. The next phenomenon worthy of remark was the indication of undue pressure on the brain of the second child, by convulsive contractions of its legs. At the same time the woman complained of severe pain and numbness in her right leg—the same side at which the head of the upper child presented. A farther examination was then instituted to discover the cause of compression, and of the arrest; for the pelvis was unu-

sually large, and the child rather small, though not much below the average size. On this examination the Doctor discovered the head of a third child below the superior strait, whilst the head of the second, whose body was delivered, was still above *the same strait*, constituting a case of locked heads. His first attempt was to dislodge the head of the third child; but this was soon found impracticable; for it was immovably fixed below the superior strait. Not approving the plan adopted by some, of delivering the upper child by the forceps, before delivering the head of the lower, he determined to await the delivery of both together, as long as he might think it safe to the mother, and if necessary, ultimately to decapitate the lower child, press the head up from the superior strait, and thus allow the upper one to pass, or assist it with forceps, as circumstances might demand. Whilst awaiting the issue of this plan, he requested a consultation; but before the arrival of another physician, and within little more than an hour after the discovery of the true nature of the difficulty, both heads passed. The superior child made some spasmodic movements after birth, but could not be resuscitated. Both heads were very much indented by the pressure of the other.

Except the injury inflicted by the accident, the children were all well formed, and very little below ordinary size. Two of them were boys. The mother passed her accouchment as well as could be expected under the circumstance of her previous wretched health.

Many cases of difficulty and perplexity in child-bearing arise from the small dimensions of the pelvis; but this was one which may be fairly attributed to too large a pelvis; for had this been of ordinary capacity, the head of the third child could not, with the good developements of both, have engaged the superior strait, with the neck of the previous child engaged in it, and the head at or near the superior plane.

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#### *Superfætation in the Mare.—Horse and Mule Issue.*

Although superfætation is a thing of constant occurrence in the lower animals, and several well authenticated cases are given of women producing both white and mulatto children at the



same time, we do not recollect an instance before the following, reported to the Farmer's Reporter, by Gen. THOMAS EMORY, of Maryland, wherein both a mule and a horse colt were produced at the same time.

NEAR SALEM, N. J., JUNE 6, 1837.

I hereby certify that I have a mare, which, this spring, produced twin colts—one of which was a mule, and the other a horse colt, both having attained, before parturition, the ordinary size. The mule is still living, and the colt died without getting up; having been strangled by the caul or suck, from which the colt was not able to extricate itself. The mule is brown, of the ordinary appearance. The colt was a fine sorrel, with blaze face and white feet. This circumstance is regarded in this neighborhood as one of a very singular character in natural history, and was seen after the death of the colt by several persons, to-wit: my son JOSEPH, and CHARLES SLADE.

The mare ran in my stable yard to foal by herself; and it was next to impossible that the colt could have been brought into the yard by any other means than by the mare which foaled the mule. It was known last spring, that soon after the mare was served by the jack, that a two year old colt of my son's got to and served the same mare; and as a further proof that this colt was the fruit of this act of coition, the colt was of the same color, and marked with white in the same manner as the supposed sire.

JONATHAN BILDERBACK.

Test: THOMAS EMORY,  
ROBERT C. JOHNSON.

SALEM, JUNE 10, 1837.

I hereby certify that JONATHAN BILDERBACK is a respectable farmer in my neighborhood, and that I believe him to be fully entitled to credit as a man of veracity.

ROBERT Y. JOHNSON.

### *Thomsonianism and the LeRoy Physic.*

In the fate of the LeRoy Physic of France, we may see that of Thomsonianism in prospective. The LeRoy Physic has been out little known in America; perhaps not much more than Thomsonianism has been in France. It was that of which Thomsonianism is, as near as may be well imagined, a true counterpart. We will give a brief view of its history.

This LeRoy Physic, tolerated as it was by the state, had an un-

paralleled run in France. It consisted of two books, and three different medicines, instead of six numbers; one, an emetic, another a cathartic, and the third, we believe, was for a tonic.—Thousands and thousands of these sets of books and physic were sold off under state patronage, amongst the dense population of France. Its praises reverberated from the Pyrenees to the Netherlands, and from the banks of the Rhine to the Bay of Biscay. That was the day of its glory. It was exalted to the sky; but it was for a brief season. “Murder will out.” Reasoning from the facts of observation, will prevail. This noble faculty will be exercised when the force of novelty passes away. France was made up of a high minded and affectionate people, whose sensibilities rebelled against the insult offered to their understanding, and the injuries humanity was made to suffer.—She was a belligerent nation, and needed all her materials. She had a NAPOLEON, whose espionage reached every where and embraced every thing; and who himself had decision, always to the purpose. Novelty passed away, and the sober, undisguised facts were returned and accumulated at the Capitol, which proved its course was, like the retreat from Moscow, marked out by human victims on every side. The first step (without parley, without compromise at the expense of humanity, without the wretched policy of legalizing manslaughter for a time, for the purpose of drawing decision from the voice of the ignorant populace,) was *the instant prohibition of its sale and use within the realm.*

The next manœuvre of its proprietor was to try the imposition in other countries; and it was consequently shipped in large quantities to America. It caught the eye of one in this place, who deemed the chance of making himself a notorious doctor too tempting to be unembraced. Its use was traced out by its multiplied, sudden and unexpected deaths. But fortunately, it had no friends more interested in its success than commission merchants, and consequently its false praises were not sung.—The books too were in the French language, and, unlike THOMSON’S, were a little too voluminous for the gulls and shallow-pated knaves to read, and it could not get a footing here.

So let it be—so *will* it be with Thomsonianism. It is now at the zenith of its glory—sounding its own false praises from

Texas to Maine, and from the Atlantic to Missouri—the most stupendous system of quackery, and the most insulting offering ever tendered to the understandings of a free and enlightened people—uttering its own banterings for proof of facts which nobody doubts, not even themselves; for such facts are too familiar to them.

Now should Thomsonians look out, and spread the parachute preparatory to the fall. We have no Napoleon; but we have schoolboys in great abundance who know well the ridiculous falsehood of their fundamental doctrine of the four elements.—We have women who know that the knowledge of midwifery, which could be obtained “in only a few minutes conversation with an old woman,”\* will not answer the demands of humanity. And we have men too who know death when they see it—men who know very well when the tall, lean, long-necked man, is taken from his feet and subjected to a steaming heat of great degree, with a perpetual drink of African pepper, &c., and dies immediately in an apoplectic fit, what it was that killed.

It is true that Americans are wonderfully fond of novelties; but they only need a little time for reflection on the observed truths. No sooner will this be had, than the steamers will be left as lonely as Sam Patch now is. This done, and they will know most clearly the cause of death when they see the ruinous effects of such a poison as lobelia, which, like arsenic, owes its safety only to its almost instantaneous rejection from the stomach.

People who enjoy freedom of opinion and the right of action, will not have so gross an insult offered to their understanding—such injuries to weeping humanity. Reason and prudence lead to the same results every where under like circumstances; consequently, the rational and prudent course of the Connecticut Legislature will be speedily adopted by other States, until the degrading stain of Thomsonianism shall no longer disgrace the character of Americans.

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\* See Thomson's Narrative and Guide.



*Diervilla Canadensis.*

N. B. PICKETT writes to the editor of the Boston Medical and Surgical Journal to say that a plant in the vicinity of Great Barrington, Mass. is held in high repute as a *specifick* for the erythematic inflammation\* produced by *Rhus Toxicodendron*, *Rhus Radicans* &c. An infusion of the bruised leaves and twiggs is applied. The writer also understands that it is used in calculous affections, and is known by the popular name of Bush Honeysuckle,† and is the *Diervilla Canadensis* of Eaton.

We should be pleased to learn the sentiments of Professor TULLY and Dr. HOOKER, to whom reference is made for information. At the same time we feel it a duty to say, not only from our own observation, but more confidently on the abundant observation and experience of a judicious medical friend, that there is perhaps no disease, the small pox itself, which is in its periods one of the most uniform of all diseases, not excepted, whose course is more certain to be run, despite of all remedies, than the erythematic or eruptive inflammation which arises from the different species of *Rhus*—that it is uniformly stated in its periods, exacerbating for the three first days, and being well by the termination of the seventh. The fact of its regular termination, as well as its regular period for decline not being generally observed, renders it probable that many articles have, from time to time, been named as remedies, only from the fact of their having been resorted to during the spontaneous decline, or termination of the disease.

We have often observed, and for a long time believed that a lotion of strong salt and water, or an alkaline lixive, seemed to possess the power of gradually modifying, and promptly dispelling the inflammation with its attendant distressing itching, burning and swelling. But the character of the disease being considered, we are left in doubt whether the improvements observed, instead of being in the relation of effect, to the application as cause, it is not a mere coincidence.

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\* See Boston Medical and Surgical Journal, vol. xv, p. 380.

† This is entirely different from the Azalea, or Honeysuckle, a shrub very common in our forests, and spoken of in a former No. as a diuretic.

In order then to deduce the truth as to the remedial virtues of *Diervilla Canadensis*, or any other supposed remedy for this disease, the *period*, and peculiar character of the disease should be carefully marked in connexion with the administration of the remedy.

As to "specific" virtues, as understood in medicine—an infallible curative power, we have long doubted whether the term had properly a place in regular medicine.

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*Tic Douloureux cured by the external application of Tartrate of Antimony.*

We are indebted to the valuable Electric Journal of Dr. BELL, (from Medicinisch Zeitung of 6th January 1836,) for the following interesting result, obtained by Dr. HAUSBRANDT :

A woman, more than sixty years of age, had suffered many years from face-ache, the severity and long continuance of which almost reduced her to despair. As soon as the pain of the face ceased, the patient felt comparatively well : when the pain came on, which was always suddenly and without ostensible cause, the muscles of the face twitched, and the eye of the affected side was closed ; the whole face became remarkably pale, and the features indicated severe suffering. As no particular circumstance capable of inducing the attack, excepting perhaps taking cold, could be discovered, the treatment was altogether empirical. A considerable number of remedies, such as are usually employed for this complaint, were tried,—especially frictions, vesicatories, narcotics, carbonate of iron,—but the paroxysms returned with greater frequency, and the patient not only lost flesh, but her condition seemed desperate. Dr. H. prescribed the following plaster, which was applied over the whole of the affected side of the face :

R. Emplast. Resinæ flavæ, ʒi.

Resinæ flavæ, ʒss.

Terebinthinæ venetæ, ʒiij. Liquat. adm.

Tart. Antimonii, ʒjss. fiat Emplast.

When this had remained on the face twenty-four hours, the patient experienced an itching, burning sensation throughout the spot covered by it, but the face-ache was relieved. At the end of several days the plaster was taken off, when the entire half of the face was found covered with pustules, which gave a good deal of pain, but which were very bearable in comparison to the former pains. The sores gradually healed by the application of simple

dressings, and up to this time (three and a quarter years,) there has been no recurrence of the complaint.

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*On Sulphuret of Lime in Diseases of the Skin, by Dr. SAVARDAN.*

Dr. SAVARDAN has employed the following ointment in chronic diseases of the skin, for the last twelve years, with very great success: eight parts of lard are intimately mixed with one part of sulphuret of lime; and one drachm is directed to be rubbed into the palms of the hands for one quarter of an hour night and morning. Dr. S. has given short notes of thirty cases of chronic diseases of the skin of various kinds affecting different parts of the body, all of which gave way to this ointment, used in the manner specified. All were cases of long continuance, and the treatment was of course protracted; one or two yielding in rather more than a month, others in three, four and seven months; whilst in others the frictions were persevered in for one or two years.—*Journal des Connaissances Medico-chirurgicales, Janvier, 1836. Eclectic Journal.*

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*Leuchorrhœa and Menorrhagia.*

In a late communication to the Boston Medical and Surgical Journal, Dr. THOMAS CLOSE bears testimony to the use of nitrate of potassa, sulph. alum. and kino in Leuchorrhœa and Menorrhagia. The basis of his prescription, taken from DEWEES and EBERLE, consists of ten grs. of nit. of potassa, and five of alum, to which he has been induced by successes therewith, in cases of failure of the above alone, to add a grain and a half of kino. This dose is given three times a day, dissolved in a sufficient quantity of water. He asserts, that for several years he has "not met with a single case of Menorrhagia or Leuchorrhœa which did not yield promptly to this remedy."

As these two diseases usually alternate with each other, Dr. C. thinks that there is little difference in their nature—leucorrhœa being commonly the mere sequel of menorrhagia—"the serous discharge escaping after the vessels have so far contracted as no longer to give passage to red blood." With this pathological view, he thinks it "not strange," (nor would it be, if



the view were correct,) "that the same remedy should be found to possess an equal control over them both."

But the interest of this prescription is not limited in his practice to ordinary cases of these diseases; but extends with equal advantage to leuchorrhœa accompanying gestation; cases of transparent discharge occurring before puberty; to the most aggravated cases of profuse menstruation, and great flooding in child-bearing, &c. One case is given of overwhelming hæmorrhage recurring once in two or three weeks, afterwards with a serous discharge so profuse, that the patient believed that more than a pint a day escaped her, and sometimes, after a few hours retention, that quantity was discharged at a gush." "So great had become the morbid determination of fluids to the pelvic region" (in this particular case,) "that a serous discharge took place several times a day from the rectum, while the sufferer was constantly harrassed with a sense of weight, distension, and bearing down, and often with great pain—fullness in the lower part of the abdomen, alarming prostration, skin leaden color and countenance expressive of such great suffering and imminent danger, that he became fearful of carcinoma, and proposed examination per vaginam." During some delay, however, this prescription was ordered, but with little confidence in its adequacy to the demands of the case. In this he was agreeably disappointed, and in a few weeks these profuse discharges were brought "within the limits of moderation and safety—the leuchorrhœa in two months ceasing altogether." "It is proper here to remark," continues Dr. C. "that the morbid current which has been so long determined to the pelvic region, continued still to flow that way, after its outlet had become obstructed; causing at first such a sudden and violent distension of the uterus, as to produce intense pain and soreness, and requiring the loss of a considerable quantity of blood from the arm, with frequent fomentations to relieve it. Before the recurrence of the next menstrual period, however, the equilibrium of the circulation had been so far restored that no farther difficulty arose, and the patient was at length restored to firm health."

"It is difficult for me to believe that success so uniformly can have been accidental; and although others may not be equally fortunate with myself in prescribing this formula, yet I think that, upon a thorough trial, it will be found to possess a greater

control over morbid uterine discharges than any other means now in use."

We have long used, with very good success in suitable cases, a kindred preparation—the Pulvis Stypticus, or compound powder of alum and kino—in uterine hæmorrhage. This we have found succeed many times, when taken dry, after the acetate of lead had failed, but we have never added the nitrate of potash.

We should be pleased to learn that Dr. CLOSE's practice succeeds as well in other hands as in his own; and we hope the successes will be returned to us in connexion with exact histories of the cases.

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## MEDICAL INTELLIGENCE.

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DEATH BY THOMSONIAN PRACTICE. Indictment founded on evidence before the Coroner's Inquest.—We learn by the Journal of Commerce, the Evening Star of New York, and other papers, that T. G. FRENCH, a young man 18 years old, and teacher in the grammar school of Columbia College, being afflicted with a slight cold, went to the Infirmary and put himself under the treatment of RICHARD K. FROST, a Thomsonian, or Steam Doctor in New-York.

It appeared in evidence that he was then provided with an apartment, and a dose of "*composition tea*;" and on the following day, "*a regular course*" of Thomsonian practice, commencing with lobelia and steam baths, which, on the 5th day resulted in the death of the unfortunate and deluded young man. The body was disinterred, and a Coroner's Inquest empannelled. Drs. CHEESEMAN and RODGERS made a post mortem examination. Dr. CHILTON, an eminent chemist in Broadway, analyzed the contents of the stomach, and one yard of the intestines, where he found two teaspoonfuls of powdered lobelia; and from a number of experiments made with it, it was found to have the same active principle with tobacco. A vast deal of testimony was adduced to shew the mode of treatment, and description of medicines used, which, in a few words, consisted of vapor baths, washing the patient with cold water immediately before he came out of them—administering to him large and repeated doses of lobelia in pills, emetics, and injections; and covering up the patient in bed with a great number of blankets, to keep up the perspiration caused by the medicines. Physicians who were examined, testified that the powers of lobelia are similar to those of tobacco—tending to create great prostration of both mental and bodily faculties; and in large quantities, most likely to pro-

duce death. All the physicians on evidence concurred in the opinion that the deceased had been most improperly used.

At the end of a tedious and deliberate examination of the abundant evidence in the case, the Jury returned the following verdict:—

“It is the opinion of the Jury, that the death of the deceased was occasioned by a general congestion of the internal organs—a complete prostration of his natural functions and nervous system, produced by the administration of deleterious medicines and other improper treatment, while in the infirmary and under the medical charge of RICHARD K. FROST.”

FROST was then arrested under a coroner's warrant, and held in a recognizance of \$5000 to answer an indictment against him for murder.

It appeared on farther acquaintance, while detained in the police office for giving bail, that this great Thomsonian doctor, was, by apprenticeship, a lock-smith, but had become manager of a Thomsonian Infirmary.

*A circumstantial account of the death of SYLVANUS B. S. RHODES, which was briefly alluded to in the last No. of this Journal.*

About the 20th of July last, SYLVANUS B. S. RHODES came to my office desiring to be bled, on account of headache, which he thought it would relieve. He had no fever, but a pulse of healthy fulness and frequency. I advised him to take in preference, a dose of calomel in divided portions; but he said he would be bled, and do that afterwards if he did not get better. I opened a vein in his arm. He had said he dreaded the operation very much, and immediately after opening the vein, he appeared somewhat faint, and was reclined on a chair a few minutes, until he felt better. He then went away, having lost not exceeding 6 or 7 ounces of blood. The next day I saw him about his boarding house door, and was informed that he went out to the workshops at the Rail Road Depot. I heard no more of his case until I was requested to visit him at his lodgings, on Monday the 24th, when I found him complaining of some headache, with a slight fever. His pulse was about 90 to 95. Believing he was suffering the effects of a slight cold only, I prescribed him a few portions of febrifuge mixture of acet. ammon. spt. nit. and ant. wine in diaphoretic doses; with a warm foot bath at night if the headache and dry skin continued. Next day I saw Mr. R. passing the piazza of the Hotel, considered him relieved, and paid him no farther attention.

On Saturday, the 29th of the same month, at about 2 o'clock P. M. I was told that RHODES was dying, and my attendance demanded. I immediately attended the call, and on arriving at the bedside where the unfortunate victim laid, and finding him in the last moments of life which was evidently being terminated by a profound apoplexy, I enquired of those present, what had the patient taken, or what had caused the present state of things? On this enquiry, the person who seemed to be endeavoring to serve him with care and assistance, and who was to me a stranger, replied, “I have given him nothing, sir, but a little warm tea, and a foot bath.” “You have given,” said I—“are you a steamer, sir?” “I own the patent,” he replied.

Knowing that this treatment alone was not sufficient cause of the phenomenon which was before me, (for RHODES was the extreme opposite in all his habits and bodily conformation to those things which dispose to apoplexy,) I pressed the enquiry. I knew that with steamers, when a patient, who had taken lobelia recovered, it was No. 1 which he had taken, which is lobelia; but when the powers of



life were irrecoverably destroyed by this dangerous article, it was only "*a very gentle emetic*" that had been given; and in like manner, composition tea is composition tea, if the patient recovered; but "*a little warm tea*" when he is killed, and that a steaming process, is in like manner a "*steaming*" or "*a simple foot bath.*" On pressing my inquiry, I was informed by Mr. J. M. MOODY, who by this time I observed at my side, and who was then serving as Bar-Keeper in the Hotel, that, in the morning, Mr. RHODES had been about the house—that the steam doctor had been telling Mr. R. of some of his great success in the steam practice, which had induced RHODES to conclude that, as he was not very sick, and the steamer had cured himself of "*just the same kind of troubles*" very quickly, he would submit himself to his treatment—that he had consequently had R. under his treatment for some two or three days previous; and that on that day he had taken him up to his room, (which was a small, close, well-ceiled room, about 8 or 10 feet square,) and put him on the use of composition tea, and No. 6,\* and applied a number of hot rocks to him, and covered him well with 4 blankets.—That on lying a while under this treatment, the patient sprang up from his bed and exclaimed, "*I am shot through my head—that the external heat and internal stimulation were then increased on account of the aggravation of symptoms.*" The room was closed; and fearing that RHODES might suffer from the want of something, he attempted to enter his room; but on opening the door, found the heat so intense that he was unable to enter. That soon thereafter, it became known that RHODES was laboring under a fit, and he (MOODY) was dispatched for another steamer—that on his return, he found him in the large adjoining room where I saw him, whither he had been brought for the benefit of fresh, cool air.

Mr. MOODY made this statement openly, and in the presence of several persons who had collected around; and again subsequently and fully at the house of Mr. DEVER, the nearest friend of Mr. RHODES, and who had indeed brought him from his friends in Baltimore, to this place.

Mr. DEVER entered the room a few moments after me, with feelings of ardent friendship, and a sense of responsibility to his friends at home; and finding his friend a livid, lifeless corpse, vented his distracting grief by alternately throwing himself on the dead body, and shrouding it in his embrace; and briskly pacing the room with all the extravagant manner of strongest grief: so that at this time, Mr. DEVER was incapable of attending to the circumstances above detailed.

I felt it a duty I owed to my fellow beings, to remark to the man who had conducted the treatment above described, (and who still stood by the corpse vainly endeavoring to make the dead arm retain its position on the side of the corpse as if alive,) that before him laid the lifeless body of one of the most estimable young men in this community—deprived of life by his ignorance and cruel temerity—but that I need say no more, as the Legislature of the state had placed him at liberty to go forth in the commission of such deeds as often as he could find subjects. I then left the scene.

During the afternoon, Messrs. DEAVES and DEVER came to my office manifesting great dissatisfaction with the management and result of the case, and asking

\* Composition tea is made of composition powder; and composition powder is made of Bay-berry root bark, inner bark of hemlock, ginger, cayenne and cloves, all finely powdered and well mixed. No. 6 is made of fourth proof brandy, or mostly of alcohol, myrrh, and No. 2 which is cayenne. Thomson directs them to be given during the steaming process, and previously to raise the inward heat. (See Thomson's guide, p. 26.) This cayenne is an African pepper of peculiar powers.

advice as to what they, as the friends of RHODES, should do; desiring at the same time that I should open the body and see if the injurious effects of the treatment were not so obvious as to sustain a prosecution against the man who had conducted the treatment. I replied that the case was, in my estimation, sufficiently plain, from the facts already well known—that there could be but one opinion on the subject; but that if they insisted, I would request some half dozen medical gentlemen to meet me, and make an anatomical examination if they should think it necessary to their judgment—stating, however, that a prosecution would avail nothing, since the Legislature had passed an act sanctioning that kind of practice; and that as yet the community had not learned enough of its ruinous tendencies, to enable them to get a special jury who would give a verdict of “guilty,” however plain the facts might be in a particular case. They insisted, however, that I should call the gentlemen’s attention to the case. I then sent a written request of the attendance of Drs. FORD, DUGAS, P. F. & J. A. EVE, and ROBERTSON—only the two last of whom however attended. These gentlemen visited the hotel, and made for themselves the necessary enquiries into the facts of the case; and felt bound, from the facts ascertained, without dissection, to fully confirm the opinion I had given. These gentlemen will not swerve from the opinion there deliberately made upon the abundant evidence which was present.

It may be well to state in conclusion, some facts of Mr. RHODES’ person and character, to which all who knew him will testify; and which tend to show that there was nothing in his habits, disposition, or personal conformation, in the least calculated to favor the production of apoplexy: and that such an event could only have come from extraneous influences. Mr. RHODES was a modest, pliant, intelligent and interesting young man, of unimpeachable moral character, and habits of the strictest temperance. His person was tall and slender, but very genteel and well proportioned; his eyes and hair were very black, and his complexion brown.

Augusta, 4th Nov., 1837.

I hereby certify, that on the 29th day of July last, (the time of the death of SYLVANUS B. S. RHODES,) I was living in the Western Hotel as bar keeper—that the said RHODES had been complaining for some days of slight indisposition—that on his being told, by a steam doctor who was also boarding at that time in the Hotel, of the great cures he had made of himself and others, RHODES was induced to tell him that he might take him through a course of his treatment, as he was so successful and expeditious—that the steam doctor then commenced with RHODES such treatment from day to day as he thought proper—That on the forenoon of the day of his death, he was, as usual, about the house, and was taken up stairs by the steam doctor to undergo the treatment for this day. That a number of hot rocks and bricks, and four blankets were provided, and RHODES put in bed and the rocks and bricks placed about him, and all covered with the blankets; whilst the composition tea and No. 6 were administered internally—that the room wherein he was placed was a small one, not exceeding, as I should suppose, eight or ten feet square—that the door and window were closed, which, with the close ceiling of the apartment, rendered it as close as possible, and that the day was one of the warmest in the month of July—that after having been subjected to this treatment for some time, I attempted to go into the room, to see if he needed any thing, and found on opening the door for this purpose, the heat so intense, that I was unable to enter the room.

Not long after this, RHODES sprang up in his bed, and exclaimed, “*I am shot*

*through the head."* Whereupon some alarm for him arose, and I was dispatched for another steam doctor. On my return, I found him removed to a bed in the large adjoining room, pulseless, and apparently dying. A half barrel of water was then provided and placed in the small room from which he had been brought, and RHODES taken back and placed therein: after a few breaths he seemed to die in the bath—was then removed again to the large room, after which he gasped a time or two, and breathed no more.

The above is the substance of the facts I related to Dr. ANTONY, who had just been called in, and was enquiring what had been done to RHODES. All of which is substantially correct, as I attended to the administrations of the steam doctor whenever he needed assistance.

Dr. A. had visited RHODES only once, which was on the Monday previous to the Saturday on the afternoon of which he died. On Tuesday, the day following Dr. A.'s visit, Mr. RHODES was better, and went out to the Rail Road Depot. Dr. A.'s prescription on the above visit was a viol of fever mixture, which I administered in broken doses, according to directions; and a warm foot bath at bed time, in the event of his head ache continuing with dry skin; but the circumstances not demanding it, the foot bath was not used. The next and only treatment which RHODES ever received after, was that of the steam doctor as described above. His death was on a Saturday, which was the 29th of July last.

JAMES M. MOODY.

AUGUSTA, 4th Nov. 1837.

I hereby certify, that on the day of SYLVANUS RHODES' decease, which I think was on the 29th day of July last, on hearing that said RHODES was dying, I went to the Western Hotel to see him, and found him dead. This was a little after 2 o'clock P. M. On looking into the room in which he had been lying, I saw a large vessel, being a half hogshead, containing water. There were rocks and wet blankets lying about the place, which as I was informed by those present, had been used in carrying him through the steaming process; during which he had complained suddenly, whilst in bed with the hot rocks and under the blankets, that he was shot through the head. That on thus getting worse under this treatment, and the internal use of composition tea and No. 6, these means had been increased—that the room had been closed as well as possible, and that whilst under this treatment he had taken the apoplectic fit of which he died.

These statements were subsequently made several times to me, and in my presence, by Mr. MADDISON MOODY, who was at that time Bar-Keeper in the Western Hotel, and who attended with the Steam Doctor to afford him occasional assistance on his administrations.

A few days previous to this, the said SYLVANUS had been to our house, and observed that he had a notion to put himself under the steam treatment, as he did not feel very well; and asked me what I thought of it. I told him I feared for him to do so, lest he might be killed by the violence of that course.

CAROLINE JANE DEVER.

AUGUSTA, 4th Nov., 1837.

I hereby certify to the truth of what I state below, relative to the death of the late SYLVANUS B. S. RHODES, to the best of my knowledge and belief.

I was called upon to visit SYLVANUS B. S. RHODES on the afternoon of Saturday, the 29th July last at two o'clock P. M., and on doing so, found him in the most extreme distress, and to all appearance dying; and I expressed to Mr. BLACK, the man



who attended him, my belief that he was dying. From my knowledge of facts relative to his indisposition, I unhesitatingly declare the opinion that he had been too much steamed; for death was manifest in his countenance when Mr. BLACK remanded him back into his room to the bath. I expressed a wish to have Dr. ANTONY immediately sent for; to which Mr. BLACK objected; saying there was no necessity for my doing so. He seemed almost lifeless, as I thought, from the effects of steaming and other treatment; but I assisted Mr. B. in placing him in a bath, in which he died. Mr. B. then agreed that I should call Dr. ANTONY, who instantly came, and at once pronounced the man dead.

I farther state that his body retained such a degree of heat, that it was painful to bear the hand on it three hours after life was extinct. It became putrid before interment on Sunday morning.

I farther state that Mr. BLACK seemed to have great reluctance to my calling any physician in to see the said RHODES; but said he had sent "for a doctor himself." RHODES was a young man of great worth, and unexceptionable habits and principles.

Witness my hand.

EDWARD F. DEAVES.

A CHOLEGOGUE PILL. The following formula for the preparation of a cholegogue pill has been sent us by Dr. E. DELONY of Talbotton, for our opinion of its merit. His uncle and preceptor, the late Dr. JOHN R. LUCAS, and since, Dr. DELONY himself have long used it, with the greatest success in chronic visceral derangements, particularly of the liver, spleen, and uterus; also in bilious rheatisms, and all that train of indescribable afflictions so perplexing to the practitioner, which arise out of those derangements of function; such as dyspepsia, nervousness or superscintiousness, &c. &c.

R. Extract. Colocynth. comp.	3i
Hydr. Sub-mur.	ʒij
Tart. Antim.	gr. iij
Ol. Carui.	gtt. j
Sapon. Hisp.	3iss

Make a mass and divide into 24 pills, common dose, 2 to 4 every night, or every other night, at bed-time in chronic cases, continued as prudence may direct.

We have not used this formula precisely in any case, but have for the last twenty years used one very analogous in the essential medicinal powers, with results which have constantly tended to heighten more and more our confidence in its peculiar suitableness for the correction of such derangements as are alluded to above. We are, therefore, of opinion, that the formula is worthy the attention of practitioners, as we think, not only from the extensive experience of Drs. LUCAS and DELONY, two of our most respectable practitioners, but from the powers and proportions of the formula itself, that it would be found peculiarly valuable in such cases. We feel it a duty, however, to say, that the two leading ingredients, are of those which should ever be prescribed by practitioners capable of comparing the medicinal powers with the derangements of the functions to be corrected; and should never become articles of common-place prescription.

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PART I.  
ORIGINAL COMMUNICATIONS.

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ARTICLE I.

*Remarkable case of Biliary Calculi.*

The following communication was addressed to Dr. PAUL F. EVE by Dr. S. B. CUNNINGHAM, a highly distinguished physician of East Tennessee:

JONESBORO', TENN., OCT. 18TH, 1837.

*Dear Sir*:—Accompanying this you will receive two hundred biliary Calculi, being a part of the number obtained on a post mortem inspection of an individual (namely, the late Judge E—,) of this place. We have retained about fifty as specimens of illustration for the use of private students. I trust that what I send may be added to your collection of mormid specimens, and with your superior talents and opportunities, subserve in some degree the philanthropic intention expressed in the dying request of him who fell a victim under their influence.

I am able to glean but a few prominent facts from his previ-

ous history which bear relation to the disease, so as to aid in illustrating its pathology.

First then I remark, he was by birth a Virginian, descended from a family of rank and influence, of but ordinary strength of physical constitution naturally, but endowed with uncommon strength and vivacity of intellectual powers, with devoted and untiring perseverance in literary pursuits. As a matter of course his habits were sedantary. Of a sanguine bilious temperament, and from his associations in life, he was tempted to partake liberally of the indulgence and luxury of the table, (a thing common in his day.) The evils to be apprehended to such an one, under such circumstances, have been too often experienced and explained to need comment. He had suffered several attacks of intermittent fever whilst a resident of Norfolk, which left him with disease, (probably enlarged or indurated spleen,) from which I am led to suppose he never entirely recovered. Some where between the years 1815 and '20, he removed to Tennessee. He was at that time from 45 to 50 years of age, and had become quite corpulent—rather oppressed with obesity, which rendered him the more sluggish and inert. His superior talents soon designated him as a fit character for the bench of the Supreme Court. Looking over the geographical boundaries of the State, and considering the arduous duties of the office, we can perceive at once that it must have been oppressive. Having to travel over a boundary of several hundred miles of mountainous country, alternating with the confinement of official duties, it must have broken down his already weakened powers. It was in one of these travels that he was seized with the first of a series of spasms of the stomach, as was then thought, which visited him at irregular intervals until the close of life. These attacks were supposed, by his medical attendants, to be gout in the stomach, and the treatment corresponded with that pathological view.—The means employed were venesection, blisters, with a profusion of revulsives, anodynes, &c. &c., but all to little or no purpose—the pains and spasm still continued. The warm bath was the first application to afford relief, and this was his chief means of reliance for many years when the pains returned. The writer was first called to administer to his relief in 1830, some years after he had retired from office in hopes of regaining his health



on his farm. On this occasion he was seized with pains in the right hypochondrium and with general abdominal tension, at first supposed to be cholic—further characterized by costiveness, full tense pulse, furred tongue, and some thirst. To subdue these, I find, by reference to my book, I had recourse to repeated and copious bleeding, warm bath and purgatives. The last of which measures had to be administered in unusually large doses; about 30 or 40 grs. of calomel, with a large pill of opium, followed by repeated and full doses of jalap and oil before they produced any thing like full action of the bowels. This was usually the case when he had occasion to take medicine at all; but his dejections when procured were of a healthy aspect, presenting the appearance of a due admixture of bile; and of healthy consistence. This was their quality too, when not taking medicine, which he rarely needed. But little gastric disturbance was ever manifest: he could retain the most nauseous medicine without vomiting, and eat heartily (if allowed,) when relieved of the severity of the pain, at any time during his illness. Of these first attacks, he complained much of debilitating sweats, for which he took freely of vegetable and mineral acids, quinine, acet. plumbi, &c. without any advantage. About the first of Nov. 1836, he complained of dull and obtuse pain in the region of the liver, with no other uncommon symptom, which was attributed to hepatic derangement, superinduced by close confinement to writing, &c. When describing it, he thought the sensation referred more to the muscles of the abdomen, or side as the seat than to deep parts. Pressure produced little or no increase of the pain, a portion of equal parts of cal. rhei. and aloes was administered, followed by oil, which brought away copious feculent stools, but afforded no relief. At this time, and for some time after, except when under the action of medicine or remedial agents, he was able to attend to the editorial duties of his paper which he was then conducting. Nov. 4th or 5th, he was bled and blistered, 5th, 6th, 7th,—no better. Ordered to dress with tat. emet. oint.; but it became so painful as to occasion its abandonment after a few hours. A poultice was now applied, and pills of cal. and rhei, and oil ordered every 2nd day: diet light, bread and tea, gruel and roasted apples. 8th, 9th, 10th,—the ointment has produced extensive cuticular inflammation, and extended like ery-

sipelas over twice the original surface. The pain and irritation is almost insupportable. He cannot be persuaded that any thing else now is the matter, as he can feel no deep seated pain in his side. 13th, 14th, and 15th,—The inflammation still extends, some pustules, but no mitigation of pain. Ordered to bathe with decoct. tan bark, and acet. plumb. two, three, or four times a day, and take a pill of ext. cicuta, and repeat if necessary in 3 hours. Next day no better, had no rest through the night. Thus it advanced for 2 or 3 weeks; presenting a most perplexing erysipelas, until in the remedial search, a solution of lunar caustic in the proportion of 2 or 3 gr. to the oz. suddenly healed it, to the great comfort of both physician and patient, (for he verily thought this alone was killing him.) But by and by, after it had gotten well, the old pain returned with increased action; he found out his mistake. We now had recourse to mercurials, in order to their full alterative effects on the system, stramonium, belladonna, &c. &c. The only relief he now obtained, was from morphine. This article could not be substituted by opium, laudanum or black drop. So sensible of its superiority did the patient become, that he scarcely could be prevailed on at length, to make trial of other substitutes. December—He now underwent a variety of treatment suggested by different medical gentlemen. But as no regular journal was kept, and it was of the miscellaneous order of treatment, I think it unnecessary to detain you. Other organs within the circle of sympathy of the disease became involved. The tongue lost in part the thick mucous coat, and became tipped with red. The whole epigastric region was painful at times; but a prominent symptom was acute pain, extending to the back—in describing which, he said he could cover it with his thumb or finger if he could reach it; so much was this the case, that we were led to attribute all the symptoms to neuralgia of the spinal nerves. He could only lie on the back or inclining to the right side. About the last of December, there occurred acute pain in the region of the kidney, attended by strangury and micturation, for which camphor, mucilages, buchu tea muriated tinct. iron, &c. were used, and measurably relieved him of those symptoms. Dropsical swellings in the limbs, next followed, for which the bandages were applied which held that symptom at bayance. But it now became evident, that

nothing but a palliative treatment could avail any thing, and from henceforth it was nearly all that was attempted. He lingered on, greatly emaciated, until sometime in July following, when death came, a much desired messenger, to relieve his agony.

And now as to the post mortem appearances :

On opening the abdomen, the first thing that occurred to us worthy of remark, was the omentum highly injected with blood, a part of which was thickened and of a dusky red colour, shewing established inflammation, the missentary about the duodenum, and the bowel itself was much inflamed externally, the stomach and upper bowels were much distended with flatus. But on opening the stomach or inspecting its outward coats, there was but little perceptible derangement. Every thing almost presented a healthful appearance, excepting at its contiguity with the liver and as it approximated the duodenum. The peritoneal coat of the smaller bowels was filled with small vessels, but may this not have been the remora of the blood from the atony of dissolution, their vascular capacity having been increased by previous excitement ? The colon and rectum presented less ambiguous marks of positive inflammation, but was accounted for, from the circumstance of his having used to a great extent, stimulating enemata, such as spirits of turpentine ; solution of salts and soap, and even tobacco. This was expected to be the case, as evidenced by slimy or mucous stools, tenesmus, &c. The left kidney was enlarged, and its capsule contained several ounces of whey colored lymph. The internal kidney was not farther examined, as our time was limited. The spleen was uneven, hard and tuberos ; but is it not fair to conclude that this was only the legitimate offspring of his former intermittents. There was situated on the left crura of the diaphragm or abdominal surface, an abscess or collection of sero-purulent matter, containing about an ounce, but could not be traced by any morbid connection to the original disease of the gall bladder. The gall bladder was completely impacted with the calculi even to the ductus communis choledochus ; several of the smaller size had made good their way near the opening into the bowel, and others were lodged part of the way ; but the coats were so thickened, that the passage seemed almost totally obliterated. The coats of the bladder



itself, were about the thickness and density of the cutis vera of the hand, having rather a callous than vascular appearance. Adhesion had formed pretty extensively around the neck and bowel with thickening and increase of substance. The bowel was still more extensively inflamed, involving most of its mucous surface: part of which exhibited patches of ulceration. There may have been about a teaspoonful of dark viscid bile, as it were, percolating the stones which presented surfaces of such perfect coaptation as to afford but very small interstices between them. The volume of the liver was enlarged and filled with grumous blood, and on the under surface considerably indurated. The lungs and chest were normal so far as examined.

I have thus presented some of the prominent symptoms of this interesting case, and will now conclude with the following interrogations:—

1st. Is it possible that the first attack was produced by calculi, which have remained there ever since, harmless for the most part, except on extraordinary causes co-operating and arousing temporary inflammation? or did the first formation pass off, and a succession of them produce the different paroxysms under which he labored?

2nd. Is it fair to presume that originally, there was but one large one: and that it became broken and comminuted, and smoothed by attrition as we see them; or were they so many separate formations?

3rd. Could surgery afford any possible prospect of remedy in such cases, provided our diagnosis of them were perfect?

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*Remarks on the foregoing case, by P. F. E.*

1st Remark. Assuredly the calculi were formed separately; each one, in all probability, having its own nucleus.

2nd. No surgeon would be justified in operating in such a case, though the diagnosis were clear. The gall bladder has truly been punctured, and hepatic abscesses are opened, without the loss of life; but to cut for stones in the gall bladder, is an operation certainly not recommended in the present state of medical science.

## ARTICLE II.

*Employment of Mercureal preparations in acute Fevers and other diseases.* By JOHN B. GORMAN, M. D., of Tulbotton, Ga.

Known to PARACELSUS among the first, preparations of this metal in his hands, we are assured, succeeded in curing some obstinate diseases, irremediable before his time. It procured for this great, but eccentric man, a wide spread reputation, anticipated him in the annals of his science a half century before his time; and gave early to the world, indubitable proofs of its great medicinal powers. No article of the *Materia Medica*, except the Peruvian bark, has been written on and discussed with so much fierceness, as the subject of our paper; and, on this account, our services may be deemed a superfluity. Climate, locality, whatever modifies constitution, must, however, modify the use of all remedies. In the middle country of Georgia, twenty years now we have been an eye-witness of the operations of this remedy on the economy, gathering up its history and value. And the justness and truth of many of the remarks about to be offered must, we think, meet the experience of many of our coteremporaries. We know, however, that prejudice and inability inseparable from us, prevent men from seeing the same thing alike, and that there must exist difference of opinion.

The fortunes of this medicine, have been various in the extreme. Its exploits in the field of disease, have caused it to be esteemed a Divinity, and procured homage. Again like VULCAN, it has been thrust down from heaven, and figured a tattered vagabond on earth;—and more respectable, it has been received at the court of kings, and refused at the beggar's hovel. Blasphemed by some, adored by others, its friends and enemies warring throughout the world, it became, at the same time the *phantasmagoria* of human folly, monument of human weakness, and the *Boanerges* of the *Materia Medica*. Its checkered fortunes and history show the powerlessness of our art, and infancy of its science. At the present day, by some parties in France, its use is too much contracted; in Italy, too much expanded by

the contra-stimulists, disciples of Professors RASORI and TOMMASINI;—lavished in Spain, England, and the United States, and their dependences; it languishes in Germany in the great shadow of the *Imponderable Biotic* of Professor MALTHUS; and assumes a spector's form in the *airy nothing* of the great, but deluded, infatuated HAHNEMANN, and his busy *book-noisy* homœopaths. A general discussion on this subject, is not our intention; we have limited our observations to only a few diseases, in which among us, its use is amazingly liberal and diffuse.

Since we have known the practice of the middle region of Georgia and South Carolina, and we believe it is pretty much the same in all the South Western States, in the form of calomel, it has been very bountifully employed in acute fevers.

The character and essence of these fevers are esteemed bilious; and calomel as a remedy against bile, has passed into a proverb. To this circumstance, in part, may be attributed the great and often imprudent use made of it. The people and patients expect calomel, and, at the peril of his popularity, should the case prove fatal, the Doctor must not refuse it. The people help to make Doctors.

In the first stage of the disease, it is used as a cathartic. But should death threaten, the *deck is soon cleared, all hands at work*, and its *salivating* powers invoked, and put in *full and desperate* operation.

The Doctor gives his last triumphant look;—"if the patient can now live until salivation take place, *he is safe*." "The Lord send it," respond the weeping friends; and the falling shower of tears is staunched.

With aching hearts, they watch around the bed;—the watch is set,—the Doctor, the busy Doctor, pours in the drug, and blacking the body with ointment, applies all his *mighty art, sole dependence* now, and pivot on which all hope turns.

Night after night you behold the taper burning;—stillness and silence reign, except a sob or a sigh unconsciously breaks. The ticking of the watch and beating of hearts are only heard, awaking awe and black forebodings of death. The faithful dogs seem to lie still, and participate in mourning.

By day, by night, on his cheek still burns this August's sun, the fever's dark red spot. Thirst torments him; he sleeps—



he dreams, frightful visions are passing before him—torment him; he half-wakes and mutters delirium, which is responded by a *low, mournful* groan. His virgin sister startles up, her beauty more tormenting by her flowing locks and neglected dress;—she gazes with all her touching force, upon his parched face and shrunken features,—and bursts away to weep. The next moment her mother follows, but soon they both return to the seat of action and sorrow. The father's firmness is in his manly soul; he feels, but remains as something firmly planted to the spot.

The Doctor, as a benefactor from the sky, again arrives, the air is again breathed; and joy springing, cramped by unsubdued despair, waves slightly through their features; and is seen through glistening tears. He examines very *scientifically*, and pronounces "the looked-for *harbingers* are present"—*salivation* has commenced,—his *hope*, his *confidence*, and *safety*; "the *fever* must now *vanish*." "He has conquered at last." With every sinew they exert confidence. "The Doctor knows." But alas! The words he pronounced with the lips of Satan, inspired by his own ignorance; the promises he has made to *sinking* sorrow, the hope he has excited and upheld by unworthy confidence, soon reveal their reality, and his unblushing shamelessness. It is putrefaction commenced; horrible putrefaction; where *health* and *recovery* were sacredly *promised* and *insured*. Blackness covers the teeth, the tongue is thrust far out, the mouth swollen; the eyes, sunk deep and dewy; the throat, tumid; the soul's fair expression, lost forever in palsy; the features *twisted, distorted, demon-shaped*. Horrible stenchfulness and dark cold night gather round him; and nothing remains now to distinguish the life, except the *little dark red spot* on the cheek, which is now growing paler for actual dissolution. The grave-clothes are finished—the lights are put out; and frittered, exhausted nature drops into long and protracted sleep.

In this last scene and struggle, the Doctor has not participated. His great work terminated in procuring salivation,—passed this, passed all hopes, except the grave. He meets, sees them again clad in the dark livery of their sorrow and misfortune. They press round him—shake his hands; their looks express kindness and gratitude. "He did his best." "It could not turn as he desired." "No one could have been more *kind, assiduous*, and

*faithful*;—all his looks, his language showed his concern. Providence\* had ordered it so.”

“Quomodo tacuisse Dii Immortales Possunt.”

The truths of this picture should excite horror for medical stupidity and unworthiness. And we remark:—than physicians, no people on earth enjoy, for the services they render, an equal weight of love, kindness and gratitude—the flower, beauty and loveliness of the human heart.

To be ignorant and be a physician, none but souls fallen from Adam a second time, low, dastardly with the stain of a second sin, can submit. Their whole life of practice can be no other than a black tissue of hypocrisy, falsehood and deceit;—hypocrisy, to conceal their ignorance;—falsehood, for they most constantly speak of what they do not know the truth; and deceit, to keep up their trade. To be the means of ruin and death to their best confiding friends; and, in return, receive thanks, gratitude and fortune *inverting nature*;—to be the firm reliance of *sacred* hope at a *holy* hour between worlds, and, only its *wicked* mockery. The thing exists, for the people can never be correct judges of skill. O horrible!—Shocking!

“His warm blood the wolf shall lap,  
The eagle, her wing shall flap  
O’er the false-hearted “Doctor.”

In the picture and case before us, the febrile excitement had reached its maximum under depletion by calomel, and, perhaps, some auxiliaries. The symptoms are unsubdued, the fever still rages, and loss of confidence ensues in the course pursued.

Suddenly all depletion is stopped, and calomel combined with opium, or some astringent is given with a different view—to effect *salivation* quick as possible. Often considerable quantities of opium are required, as the medicine is thrown in freely, to prevent its passing off. Here then, the whole system is suddenly locked up, and at the very moment, when sedation, cold sponging, local sanguine emission, cautious alvine depletion, free cooling diluent drinks, &c. are most loudly called for, and would do more to calm the raging malady, than at any other period before. But what ensues?

\* Pardonable blasphemy to save the Doctor.

The liver is active from the disease, rendered infinitely more so by the constant stimulations of the previous calomel; the bile, which before had a free passage, now is clamorous for evacuation, and more opium must be given to save the salivatory from passing.

A sudden and violent shock is thus given to all the systems, inducing a new order of movements. The mucous alvine secretions being *suppressed* solicits to *action*—the organisms connected in dependence and subordination with this tissue—*revulsion*. Shades of icterus tinge the skin; copious exhalation takes place from the serous membranes, as is proved by *tension* and *soreness* of the *abdomen*, fulness and tightness of the chest with some cough, of those who recover. Some effusion escapes from the *arachnoid*, one of these tissues, and the brain is slightly compressed, as is proved by these cases almost always manifesting and terminating in what are called *typhus symptoms*. The urinary secretion becomes scarce, thick and higher colored. The skin is more parched, dry and rough, all manifesting a decided diminution of secretory, excremental elimination.

Thus a new stimulus is offered to the circulating system. The blood arrives at the right side of the heart more *heterogeneous*, loaded with more highly stimulating matters, which added to the stimulations of calomel and opium so freely given, augments its velocity of motion. Nutrition, so *important*\* to life, is nearly suspended. The powers of the *cerebro-spinal* functions, must participate in the exhaustion now inevitable—death horrible, or nature *pitying*, snatches her tortured offspring from the barbarous hands of its persecutors, and saves by her own matchless skill. But to follow this practice out:

By a law of diseased action, all the alvine secretions suppressed, the serous membranes are excited to secretion. The *malaise* of the chest and abdomen, are not noticed; that of the brain, or slight compression of the *arachnoid*, engrosses all attention. It is considered an actual *inflammation* of the *brain* itself, the disease is changed into *typhus*, proved to be so by the lesion of the mind's faculties thus assiduously procured by *myopia*, *strabismus*, &c. The head is shaved, and a powerful

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\* Physiologie Comparé, Tiedémann.



blister applied ; if action be sluggish, blisters over the body. The patient rises from this typhus made and cured, as from the fangs of a hyena, or grasp of a vampyre, to a long and tedious convalescence ; or disfigured, dilacerated, exhausted through accumulated ills, sinks to the "*long rest of Osian's narrow house.*"

In the first case, the patient is rescued from the new disease, typhus, unwittingly brought about by this hot, stimulating, *incendiary* treatment, exhausting all forces, producing derangement and congestion, calling forth secretions and compressions, which would have remained quiescent under different management, or nature left to herself *undisturbed*. But unfortunately for humanity, this typhus is considered only as a stage, and natural part of the primitive fever, and never once is dreamed of, as the offspring of art. This is the fearful delusion !

Since the antiphlogistic and sedative treatment of fevers has increased in popularity, the annals of our science share and prove, that this sort of typhus is fast banishing the world ; and, as much warring as has been published on this subject, it has not had its weight, where it has been our lot to live and observe.

Among us it seems to have been more or less confounded with the typhus of European writers ; and their stimulating plans have been employed. Yet nothing can be more distinct, than our typhus or *cerebro-spinal exhaustion* of our pleurisies and autumnal fevers, and the typhus or jail fevers of Europe, propagated perhaps, by a peculiar infecting principle, of which all the phenomena are the particular offspring.

But to resume :—In the last case of our patient, he sinks through nature *outdone*,—the total subversion of the subordination of his living functions. Let us now attempt our explanation of the *mechanism* of recoveries, in similar *circumstances*, from this mode of modification, which, to some extent, may explain the prevalence of its *continuance* in use.

SALIVATION is the ultraism of medicine in the geographical limits of our paper, and almost universally resorted to in all diseases grown desperate, after other remedies have failed of success. I believe we are very well established in this assertion, although there may be exceptions. It has been so now for twenty years, and how much longer before, is not known.

Since, however, the introduction of quinine, many more cases are cut short; and much fever, we may suppose, fail to challenge its employment. Continued fevers chance the oftenest.

It is the last, solemn, farewell ceremony the Doctor performs for his patient,—something that can be done always, when nothing else is known;—a *forlorn hope*, to which ignorance, black ignorance, holds the torch;—in repute three fourths of a century ago, whence our fathers came; that long-since eradicated and driven hence, now in the New World, puts forth its autumnal bloom.

Among us, however, as it is not taught in our schools, and has not the sanction of teaching, it is highly probable, it is born of *false experience*—the “*experientia falax*” of CELSUS, who calls it the *Demon* of medicine.

1st. Resorted to, as it commonly is, in the latter stages of attacks; and, often at the very moment when nature is preparing the crisis and sweet repose of the patient, being a stimulus of pretty high powers, its stimulations were sometimes not *unwelcome*, if of the right sort; and the only material effect it will have, is to make the recovery long and painful, and upon future health.

Here, unfortunately, the recovery is attributed to *salivation*, the only services of which, if any, were to stimulate at a pressing and necessitous hour; to entail afterwards, sorrow and a long catalogue of evils, especially if pushed *in extenso*.

Flushed by supposed success, the deluded physician tries it again; and, thus this *idolatry*—this *Juggernaut* of medicine is kept alive in the nineteenth century, against all the lights that burn.

2d. It is administered when the case becomes desperate at an earlier period, and, before prostration. Now it has the opportunity of exerting its most deadly mischief, the prospect being still fair and possible, by proper treatment, or powers of nature, for a favorable termination.

It commences its work by the improper stimulation of its own means; by the opium combined with them; by suppressing the secretions, source of new stimulations, before its own can take place; by exciting, as we have said, *revulsive secretions*, which, without its interference, would not have existed in the natural

order of the disease ; by consequent arachnoidel secretion and compression, bringing about by the aid of *hyperexcitation* thus procured. *Cardiaco-cerebro-spinal exhaustion*, or which is the same thing, this *Georgia Typhus*, and death, or something like a spectral resurrection from it.

But it is never supposed, this salivation, *deep, thrice deep*, killed. Death is always attributed to the typhus, inflammation, compression, mortification, to any but the true cause, or the Doctor's trade and reputation would be spoiled.—*Horribile dictu*—O luctum veritatis ! !

3. Salivation is resolved upon, when the disease has maintained apparently its energy until a late period ; just before the forces are about giving way ; the vital unity of action growing weak ; and the system beginning badly to obey the helm of life. Under any circumstances or treatment now, the case is desperate. Salivation here must cut off all hope, and procure death.

In this case the oxydizers or lungs are spending—hæmatisis, imperfect, the circulatory enginery, exhausted, the tendency to capillary *stasis*, universal, nervous irradiation, *partial*, natural chemistry, on the incipient *failure* of the *vital*, beginning to affect the whole fluids and solids :—life soon must flutter, struggle, salutary secretions from any quarter, *impossible*.

The only effect mercury, as we have said, can have in such a case, is mortification, to which there is an universal proclivity and death. But it is given—lavished in proportion to the case ; its wonted secretions eliminating its force, impossible ; the tissues wont to elect and appropriate its action, *ramolesce* and blacken,—hideous putrefaction and stench threaten away from the couch, weeping sorrow, tenderness and love ; the pious spirit *pure—clean*—loathes the *binding fetter*, which breaks,—and it rises *fair*—the body sinking into a scathing *mercurial Hell*.

I write no fable ;—again and again with the most pained sensibilities, have I been compelled to witness such cases, which I have said among us are common ; and a great number of which, from much and long experience, and practice, would have yielded readily to a different treatment. Our reasoning, and the coloring given to these cases, may be doubted ; but the facts must challenge experience and belief.



We remark on the first of the three cases : Employed under these circumstances, we have often known the patient to recover, and get on his feet before the salivation came on. Now confined to his bed again by the medicine, he struggles long through suffering and horror more severe than his first attacks, to die from exhaustion at last, when the stimulations of the salivant begin to abate ; or rises from his bed *exsanguinated, shrunken-eyed, hollow-featured*, with a troublesome cough, to recover finally next year, or never regain completely his former health.

In the 2nd case : To salivate the antiphlogistic and sedative treatment is abandoned, at a most *precious* time, when it could do its greatest work, and turn the doubtful scale on the right side. When the whole system has arrived at the greatest excitement, hot, stimulating salivation is employed, helping out disorganizing inflammation already existing, dematurizing all action ; producing *ut supra*, typhus and death ; or—salivation and the fever run on together, as we have often seen. Nature triumphs over opposition at last, or mercureal exhaustion and death come apace.

In the 3rd case : Salivation is open murder and death, as has been seen—tolerated homicide almost in the presence of natural death. But does this palliate the crime ? a high offence, against which there is no law, as if it were right to kill a man likely to die.

If the patients die in China, the law puts all the Doctors\* to death ; if they kill in Georgia, the law protects. Which is the most reasonable—rather absurd and abominable ?

In conclusion : In all acute fevers, salivation should never be employed. This practice has ever been absurd, wrong ; arose from false facts and false experience at first ; and sustained afterwards by prejudice and ignorance. Its apparent good with a long train of evils, is most always, by its stimulations. But these, in a very superior degree can be promptly procured by opium, camphor, brandy. Could it be known and believed, the good of salivation arises from its excitements, the delusion would vanish forever ; and those of the opium, camphor, &c. substituted in its place.

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\* STAUNTON'S Embassy to China.

What a renovation of good and comfort would it be to the present practice, so much and so extensively pursued; a practice which has prostrated our art, and brought the whole of our *Materia Medica* into disrepute among a great portion of the illiterate world, which has mainly set up a new species of quackery, and given it the most convincing and revengeful argument against us, in the minds of the people. What but *mercury* and its *odious, hateful* salivations, have given rise to so much talk and noise about medicines *purely vegetable*? and emboldened its makers and venders? It is *mercurial vengeance*—the sin of its *unholy* use *revisited* upon us?

In final conclusion, we would consider mercureal purging, and the secondary effects of this drug in its *alterative* use.

Take now, especially about the approach of Autumn, the healthiest man, and give him daily purgative portions of calomel. Soon he will become quite bilious, throw it up of the natural color, and pass it copiously by stool; and soon, deranging the natural healthy state, it will become turbid and black. Fever will be declared; still purge him as before. It grows desperate; now touch him; salivate him deeply; typhus *ut sapra* is declared: shave his head and blister him freely, and he recovers. But he labors under the *slight cough*, feels the *pectoral* and *abdominal malaise*. After some time he is attacked with bilious colic. His liver is *hypertrophied*.

Again: The patient has some fever; is sick; his physician carries him through as above. At length, he is troubled with excessive bile; suffers from abdominal pains. His physician comes again, touches him now slightly to cure this bilious colic: and recommends him occasionally to take a dose of calomel when he feels it coming on; and the more and the oftener it is taken, the more it will be needed.

The drunkard wears his shame in the efflorescence of his face; but the intemperate in mercury, his *scar deep hidden* in the liver, the glands, the mucous and serous tissues. Thus, he who was once free, has made a thorough bilious constitution thus procured. His liver, &c., is *hypertrophied*; he tends to dropsy and wasting death. Nothing but a change of climate and country, and abandonment of the medicine which brought it on,

can redeem and save him from his own unconscious imprudence, and his Doctor's folly.

A great number of cases purely of this character now actually exist within our knowledge, and some under our care.

Again: The patient has fever, but not bilious. Calomel is lavished; the quiescent liver becomes irritated; its irritations may now operate with the original cause to aggravation, or supplant it entirely, and become itself, the focus of universal irritation or fever, which will run on to destroy the patient; or he recovers exhausted, making this of what would have been a very light and mild case, a mortal or desperate and frightful one.

Again: The patient has fever, is bilious and of the bilious temperament. A large dose of calomel might be of great service and the best remedy; but keep it up, and it is sure, like the rest, to become a bad one, but with a little more certainty.

In any of the cases above, calomel might be admissible, nay, the very best for the patient, but must not be repeated or persisted in. But in the following, a single dose might ruin all hope and the brightest prospects. The patient, with great depression has repeated spontaneous bilious dejections; his gastrointestinal mucous tissues, highly phlogosed, the *valvulæ conniventes* developed, closing up greatly the passage.

Now touch him with a good dose, (common practice,) and you may touch a magazine to blow him up; or he escapes, a tattered relic of what he was, or of what, under other treatment he might have been.

I will mention here a great truth: Calomel as well as the bile, is very apt, very commonly excites the developement of these *valvulæ* closing or narrowing up the passage; which, now it is lavished to force, urging on ruin by ruin.

We know from MOSELEY, HILLARY, JACKSON, CLEGHORN, JOHNSON, BANCROFT, from a host of such—from French and Spanish writers, from our own experience, that in tropical and citratropical climates, the liver figures and reigns the most conspicuously—tyrannizes in this great theatre of disease. It is the same in our country.

Why, then, in our treatment, have we considered, do we provoke wontonly and unmercifully the anger, and rage, and



opposition of the liver,—the lion, by universal consent, of this great austral hemisphere of sickness and death? Rather let us quiet it when it can be quieted, and as soon as possible; when quiet and in its proper place of action, not provoke; when out of place, torpid and the economy in need, arouse it to effort. As soon as possible—for it is true as we have said, by improperly exciting it, for it is generally and almost always too active under our autumnal sky, it can easily supplant the *primitive* febrile irritation, and become *itself* the burning focus of the fever leading on unquenchably to the tomb. Not to provoke it when its function is straight with the economy; because we get rid of great perplexities, difficulties, and prospective danger. To arouse it, because its influence is natural.

But we are not writing on practice. We avow it: we have no interest but the profession to serve. You ask for proof. We must refer you to the symptoms while living; and the truth as it is recorded in the dead man's body, and we will not fear. We ask pardon of our cotemporaries; and by those who are making up their opinions, we would be heard.

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### ARTICLE III.

*Remarks on Debilitants and Sedatives. By Dr. JOSEPH A. EVE. [Continued.]*

*Cold.* The abstraction of Caloric is the next subject that demands attention under the head of Debilitants.

Of the stimuli that are essential to the production and maintenance of vital phenomena, caloric is one of the most active, universal and constant in its operation; hence its abstraction must be attended by a correspondent depression or diminution in the manifestation of those phenomena, or in other words it must necessarily lessen organic action and cause debility.

Caloric is essential to organic action, the former appearing to stand with respect to the other, mutually, in the relation of

cause and effect, and of effect and cause : for we observe increase of action is always followed with augmentation of heat, and depression of action with diminution, and on the other hand we invariably find elevation of temperature increases action, and reduction depresses it. It would certainly be superfluous to advance arguments to prove that cold or the privation of caloric, in its direct effects, is most decidedly and eminently debilitating—its depressing and torpifying influence, on man and the whole animate creation, is too obvious to require proof—the actions both of animal and vegetable life are suspended without an adequate supply of caloric. Abstract caloric from the system, and immediately “this sensible warm motion becomes a kneaded clod.”

It is true persons feel stronger and are not so soon fatigued in moderately cold, than in warm weather ; hence some physicians consider a moderate degree of cold, as exciting and strengthening ; but this is unphilosophical, cold being nothing in itself, but simply the absence or privation of heat, cannot possess any stimulating property. The reason that we feel weaker during a hot day, is because the excess of caloric stimulates too much, and induces indirect debility—it is because a moderate degree of caloric, not a moderate degree of cold, is more congenial to strength and muscular exertion, than the excessive degree of the former, which constitutes what we term a hot day.

The temperature most conducive to strength, and compatible with active exercise, is altogether relative, depending greatly on the circumstances, habits, &c. of individuals ; those recently accustomed to severe cold, feel oppressed and overcome by heat in weather which is at the same time distressingly cold to those accustomed to intense heat.

“The effects of cold, (says BEGIN,) have been the theme of endless discussions, on which a proper study of the laws of the organism has alone been able to shed some light. According to the state of vigor or debility of the patient, and the extent, intensity, and duration of its action, cold is either an useful tonic, a powerful irritant, or a great debilitant. Its impression may even cause death, by checking all motions in the organs.”

The action of cold as a tonic or irritant depends on the principle of reaction. When the body or any part of it has been

exposed for a length of time to a very low temperature, the excitability accumulates to such a degree, during the privation of the accustomed stimulus of caloric, that on its sudden restoration reaction takes place with such violence, that intense irritation and not unfrequently disorganizing inflammation is the result, as exemplified in frost-bitten limbs, &c.

Reaction is always proportionate to the degree of subsequent depression. If the system be subjected to a moderate degree of cold, and restored to the natural or ordinary temperature as soon as reaction commences, the tonic effect will be evinced, as displayed in the employment of the cold bath for its tonic influence on the system. As the patient enters the bath he shivers and continues benumbed and torpified until reaction is established, when he experiences a sensation of warmth as though the water around him had suddenly become warm, and feels a genial excitement pervading his whole system: if at this moment he should leave the bath, he will feel excited and invigorated, and enjoy in the greatest degree the tonic effect; but should he remain in it longer, this pleasant excitement will subside, and the depressing effect of cold be again realized without any farther alternation of reaction.

Cold depresses excitement by abstracting caloric, which as an excitant produces and maintains it: it is upon this principle that it is employed so extensively, and with such beneficial results, both in medical and surgical practice, for subduing action, allaying pain and restraining hemorrhage. The operation of cold water, ice, and other cold applications in abstracting caloric depends on the disposition this subtle fluid has to diffuse itself equally through all bodies in contact or proximity—the warmer or those that have more caloric imparting to the colder or those that have less, until an equalization of temperature is established between them. When in the treatment of disease the abstraction of caloric is indicated, availing ourselves of a knowledge of this principle, we fulfil the indication by means of cold applications to the part or organ whose excitement we wish to reduce. For this purpose we usually employ water, ice or snow, because they are generally most convenient, but a great number and variety of means are practised for the abstraction of caloric: exposure to cool air, cold cataplasms, mud, clay, cold metal,



evaporating lotions, &c. Nor are we confined to the external surface, in the administration of means to reduce excitement by the abstraction of caloric, the stomach and intestinal canal may with equal convenience be treated on this principle, through the medium of cold drinks and cold enemata, which often prove very efficacious resources, in high grades of gastric and intestinal phlogosis.

The following paragraph from M. BEGIN's work on Therapeutics, is most graphically descriptive of the effects and lucidly explanatory of the principles involved in the operation of cold applications.

"The primary object, (or rather effect) of cold is to condense the tissues, draw their elements closer, and increase their thickness and solidity. The skin is clutched and covered with asperities occasioned by the projections of the bulbs of the hairs and that of the sebaceous follicles. The parts covered with cold topics turn pale, owing to the contraction of the vessels which cease to admit as many red particles of blood, and in which the circulation becomes less active. Accompanying these phenomena, the local nervous action is diminished, sensibility lessened, and a notable numbness felt in the parts that have grown cold. We must not think however, that this state is continued, during the whole time of the application: for soon after the first impression has been received, and though it may still continue to act with equal force, a reaction always takes place in all the parts submitted to the operation of cold, the blood is propelled toward them with renewed and increased vigor, the parts become more or less red and painful, and experience a sensation of intense and even burning heat." "But these sensations are not of long duration; they disappear gradually and the debilitating action is soon reproduced. Then the tissues remain pale, cold, and hardly sensible; the action of the capillaries is diminished, the irritation is suspended and soon disappears entirely." "To the action of cold is then subjoined the emollient and relaxing effect of water which serves as a vehicle to the former. These changes produced by cold applied to the tissues or to the skin which covers them, appear diametrically opposed to those determined by stimulants. In this respect, cold applications constitute one of the most efficacious debilitants we possess. They are employed in two opposite circumstances; the one where there exists no tumefaction nor irritation in the parts, and when it is only necessary to prevent those accidents, as in contusions, sprains, &c.; the other, when the irritation and the phlegmasia have already made their appearance. In either case, we may

cover the parts with pounded ice wrapped in a bladder, piece of parchment or oiled cloth—or rather plunge them into a vehicle filled with cold water, if the shape, function or situation of the parts will permit.”

From not properly understanding the principles concerned in the operation of cold as a therapeutic agent, there is much diversity of opinion on the subject, and much contrariety of report upon its efficacy. Some regard it simply as a debilitant, whilst others look upon it as a stimulant or tonic, and others again view it in the light of an energetic astringent; whereas when we properly comprehend the true principles involved, all difficulties immediately disappear or admit of easy explication.

We have already seen that the *modus operandi* of cold is that of a direct debilitant, acting on the principle of abstracting stimulus, and that its action as a stimulant or tonic is only secondary and temporary, depending on the principle of reaction: little reflection will convince us that its effect in condensing the tissues is not attributable to any astringent property possessed by water, or by cold, which is nothing but the absence or privation of caloric; the condensation produced by the application of cold water is the result of depressed action, the excitement being reduced in the part, less blood is attracted to and retained in it, in consequence of which the capillaries collapse which renders the tissues more solid. Let us for a moment contemplate the *modus operandi* of cold water in arresting hemorrhage, which is generally, though erroneously, ascribed to its astringent power. Under the influence of irritation, an afflux of blood is determined to the organ from which the hemorrhage proceeds, cold water by withdrawing the stimulus of caloric reduces the excitement; the blood therefore is no longer attracted to it in undue quantity, the vessels contract and the effusion ceases.

We have the administration of cold so much under control, and can regulate its action with so much precision, the conjoint exhibition of sedatives is not so essentially necessary, as in the employment of bloodletting; for reaction being always in correspondence to the degree of depression produced, it can always be regulated, by commencing with a moderate degree of cold and by making, after reaction has subsided, applications of more intense degrees which may be continued as long, or repeated as

frequently, as the case may require, without any of the remote dangers consequent on blood-letting. But the combined administration of sedatives is often productive of very marked benefit, as exemplified in the superior efficacy of cold saturnine lotions, solutions of morphine, of prussic acid. &c. to that of simple cold water, in subduing inflammation and allaying irritation.

Bloodletting and the application of cold, both act upon the same principle, the reduction of excitement, by the abstraction of stimulus; their comparative advantages may be thus explained: In a violent fever or inflammatory affection, when there is redundancy of blood in the system, and the strength of the patient previously unimpaired, nothing can prove a substitute for copious sanguine depletion; the lancet stands unrivalled in efficacy; it is our chief reliance, the anchor of hope, the talisman of safety: until blood has been freely abstracted, the relief afforded by the employment of cold applications must be temporary and ineffectual, somewhat comparable to the temporary smothering of a flame by heaping fresh fuel upon it, which soon bursts forth and blazes more furiously than before; thus the excitement allayed, not subdued, will reappear and rage with increased violence. But when, notwithstanding copious sanguine depletion, there is still violent action and intense pain, with determination to some part, especially if it be to the head, and the case do not justify farther loss of blood, cold may often be employed with signal benefit. It reduces excitement without expense of the vital fluid, the debilitation produced is consequently less permanent, though it may be continued long enough for a suffering organ to recover its normal state. Bloodletting and cold act both on the same principle:—the difference in their effects depends on the difference there is in the nature of the excitants they abstract, both of which are equally essential to life and the maintenance of excitement. When blood is taken away, it is replaced slowly by assimilation, which process is often interrupted by the disease for which the bloodletting has been practised or by the debility consequent on the loss of blood, or it may be restored by transfusion which operation is attended with much difficulty and uncertainty; whereas, when caloric is abstracted, it is soon renewed by the system itself, or by external means if necessary.



Inflammation acts as a stimulus, exciting the action of the heart and arteries, but excessive action always exhausts the vital powers, and induces indirect debility, so that when it subsides or is subdued, the energies of the system are greatly depressed. Now it is certain, if we can reduce inflammation and prevent the inordinate, exhausting action consequent upon it, by cold applications or the conjoint administration of sedatives, with the expenditure of less blood; in the same ratio will the powers of the patient be preserved, and the typhoid type less likely to ensue, and the patient sooner recover his accustomed strength.

When it is deemed expedient to employ a very intense degree of cold, it will be proper to avoid a sudden and vigorous reaction, by commencing with an application of moderate temperature, and gradually reducing it down, even to ice itself if desirable.

The necessity of keeping cold steadily applied, or of renewing cold applications as often as may be required to keep them from becoming warm, is too obvious to need even an allusion to it; were it not that a neglect of this caution too often obviates entirely the good effects of this valuable remedy. It will of course be necessary that the application of cold be continued long enough, not only to extinguish the irritation in the parts to which it is applied, but to destroy their disposition to react against its impression, otherwise the consequent reaction will very probably increase the irritation and congestion intended to be removed. Snow, ice, or a degree of cold as low as zero, which if general would soon extinguish life, may be applied to parts of more or less extent, constantly for days and even weeks, not only without danger, but with the happiest effects.

Thus have I endeavored to explain the *modus operandi* of cold as a therapeutic mean, and to set forth the most important principles that appertain to its employment; it would be an agreeable task to elucidate and illustrate those principles more fully by a practical application to the treatment of disease, but that would be incompatible with the limits I have prescribed myself in my remarks on debilitants and sedatives.

[TO BE CONTINUED.]

## PART II.

## REVIEWS AND EXTRACTS.

*Medical Statistics.*

The following paper, by M. DOUBLE, on the question of the inapplicability of statistics to the practice of medicine, contains much good sense and fair reasoning. The results at which he arrives are true and unavoidable, and it is most unfortunate in medicine that so few can come to realize these truths, and adopt "the only methods admissible in practical medicine, analysis, logic, and induction" in each particular case under all its present circumstances.

We give the essay in full, as extracted from the London Medical Gazette by the American Journal, with the editorial of the latter.

This question has been recently brought before the Royal Academy of Medicine at Paris, and been very elaborately and fully examined. The following paper read by M. DOUBLE, in the discussion, excited considerable attention, and we shall lay it before our readers, as the subject is one of great importance. For ourselves, we have already expressed our opinions on the subject, (see our No. for August 1836, p. 489,) and need only add that it is our continued conviction that until some new problem in transcendental mathematics shall be devised, the numerical method can never serve to guide us to a positive method of treating individual cases of disease. At the same time we disclaim all wish to invalidate the general usefulness of statistics in medicine. But we will not detain our readers further from the observations of M. DOUBLE.

"The science of statistics, is in these days, one of the most fashionable; and in the ardor of their zeal, its disciples have applied it indiscriminately to medicine. They have attempted to substitute mathematical for logical analysis—to make arithmetic take the place of induction—and calculation that of reason. Let us, then, consider what some expect from statistics

applied to medical practice. In mathematical analysis, the probability of future events is calculated from the observation of preceding facts, but always under the rules of the universal laws of large numbers, and without any individual application.

“In medical statistics, on the other hand, the numerical method is expected to determine from the observation of preceding facts, and according to their number, the best method of treatment in each individual case which may occur. This, however, is quite impossible; and I may remark, that were it ever affected, medicine would cease to be either a science, an art, or even a profession; it would become as mechanical as the employment of the shoemaker.

“What is called in geometry the universal law of large numbers, is the rule and the foundation of all calculations of probabilities. One of the conditions of this law is, that the causes of the events calculated, though some are constant and others variable, yet can in no sense be said to vary progressively. From this law it results, that all the differences and irregularities which balance each other disappear in the quotient: and in this way the calculations of lotteries, of maritime insurances, &c. are made.

“But this is evidently not applicable to medicine: neither our successes nor our failures balance themselves in large numbers, as in the case of marine insurances. Each of our problems embraces but one individual; and besides, diseases always have their prevailing character, varying progressively according to an infinite variety of causes.

“M. Poisson, in his new work on the Calculation of Verdicts given by Juries, writes thus—“In most questions of eventuality, the *à priori* determination of the chances of events is impossible, and it is only from observed results that we are able to calculate them. Thus we cannot *à priori*, calculate the chance of a vessel being lost in a long voyage, but we must compare the number of losses with that of voyages when the number is large, the result is pretty constant, at least in each sea and in each nation; but if the calculation be founded on a small number of facts, there can be no certainty in the reckoner's results, if it be founded on a large number, the results are almost sure.”

“Besides this, it must be remarked that mathematicians themselves are not all agreed as to the value of mathematical analysis applied to the calculation of probabilities.

“The calculation of probabilities, from its very nature and professed scope, only makes approaches to the truth; yet its results have often some degree of apparent certainty. Nevertheless, the facts on which such calculations are founded, are so vague, uncertain, and variable, that the results are not to be



depended on, and sometimes the most inconceivable mistakes take place.

“The numerical method at once supposes and sanctions one of the greatest errors in therapeutics—namely, the adoption of absolute and exclusive measures. The celebrated problem of PICKAIRN—“For a given disease to find the remedy”—is only reasonable when understood in this way—“For a given indication, to find the best method of fulfilling it.” Each individual malady is not a simple phenomenon that can be represented by unity; it is not certain and fixed, but constantly varying. Thus the pneumony of to-day is not the pneumony of yesterday, and the pneumony of Peter is not that of Paul.

As an illustration, consider how disappointed the young physician is in passing from a lecture or a didactic work to the bedside of the patient; and this because he is transferred from disease in the abstract to its reality. Take any large collection of cases: consider the epidemics of HIPPOCRATES, the constitutions of BAILLOU, the letters of MORGAGNI; the consultations of HOFFMANN, the *ratio medendi* of STORK, &c.—how many cases will you find alike? The universally admitted law of idiosyncrasy and of individuality, so infinitely variable, cannot be included in any calculation of probabilities. Let us first examine how the numerical method applies to a man in a state of health. Let us take two hundred healthy adults, of the same sex, age, profession, and condition: how many shall we find in exactly the same condition, so that we may say, “this health and that health make two?” Or let us take their powers of intellect or of digestion: how many are alike in their intellect? how many have identical digestive powers? When the different series of uniform intellects and digestive powers have been made out, a separate and universal method of treatment for each series has to be invented; and how will you succeed in this?

“Let us again suppose that there are in childbed, under the same circumstances, say a thousand women, and that the news of some grievous calamity is brought them; five of them may become deranged, and the other 995 not have their reason affected. In calculating probabilities, it is an easy matter to determine this. But will any physician be therefore satisfied that he may announce a piece of bad news to a lying-in woman without danger? Or let a thousand men, in a state of violent perspiration, drink a given quantity of ice-cold water: ten are seized with pneumony, five with gastritis, and five with dysentary, while all the rest remain in perfect health.

“But from theoretical grounds let us come to facts, and take the typhoid fever, of which term, by the by, I do not at all ap-

prove ; for, under it, gastric affections, bilious fever, entero-mesenteric fever, mucous fever, catarrhal fever, &c. are confounded. It was this that led to that inextricable chaos of difficulties in your late discussion on that subject. The mistake was, that by the name of typhoid fever was designated a certain peculiar morbid state, which may be a dangerous termination, or a troublesome complication, of almost all other diseases. Thus pneumonia, apoplexy, peritonitis, uterine phlebitis, phthisis in adults, surgical operations, &c. occasionally terminate with typhoid symptoms.

"Still more so is this the case with bilious, catarrhal, and inflammatory fevers, which, according to my experience, all commence the typhoid fevers ; and, though I have seen a great many cases, I have never seen typhus come on primarily, but always preceded by nervous or febrile reaction, such as biliousness, an affection of the stomach, &c.

"And here I may remark, that I think it one evil of the present state of medicine, that our experience is too exclusively that of hospitals. We thus only see one condition of life, and the disease already established, and can seldom retain the patient long enough to see all the steps by which health is gradually re-established. It is in these patients, in whom we never see the commencement of the disease, that we meet with the most marked cases of typhoid fever.

"Well, then, in this same typhoid fever, can any unique, absolute, and exclusive treatment be assigned ? If the practice of medicine did not already do so, sound logic would give a negative reply. When we consider the infinite modifications of circumstances, the degree of strength, the state of the nervous system, the moral condition, the idiosyncrasy, the age, the sex, the country of the patient, the nature, period, and prevailing character of the disease, &c. &c., we see how impossible it is that any employment of figures, any calculation, however nicely balanced, should lead to any uniform method of treatment. I have in another place shewn, that, in the opinion of LACROIX, LAPLACE, and CONDORCET, reasoning, logic, and induction, are in medicine not less useful, or less certain, than numerical calculations : even in geometry, in almost all points, calculation has hitherto only proved what reasoning has already suspected. "Theory," said LAPLACE, "is only common sense applied to calculation." The different influences modifying disease, to some of which I have alluded, are no less numerous, for example, than the letters of the alphabet. Yet, consider the richness and variety of language formed out of these letters : by that you may form an idea of the variety of the circumstances attending disease ; or, to push the analogy still farther, there are in the

alphabet certain elements of more importance than the rest ; in like manner Disease has, so to speak, its vowels and its consonants.

“ For myself I must say, that the more I see of disease, the more does each case appear to me a new and a separate problem. When they see a new case, how many physicians can put down in figures the number of cases exactly similar which they have treated ? I therefore think, that the useful results to be obtained from statistical calculations, in the treatment of typhoid fever, must be reduced to this : that we may usefully register the relative indications in cases within our own practice, and under given circumstances, of blood-letting, evacuants, tonics, &c. But the numerical method can never point out the treatment to be adopted in any one given case.

“ But the numericalists, finding the subject of typhoid fever difficult ground on which to fight, have taken the case of intermittents. With regard to intermittent fevers, however, we must not judge by those of the capital : first, because cases are rare in this country ; and, secondly, because they yield easily under almost any means that are employed. It is in countries to the south that they are violent ; and I may remark, in passing, that this is another instance of the complexity of disease in general.

“ But even in this country I have cured intermittents by the most different modes of treatment !—by local and general bleeding, by emetics, by purgatives, &c. : and if we examine the history of medicine, which, when well understood, is the best instruction that a physician can receive, we shall find that intermittent fevers, whatever may be their type, vary constantly in nature and in character, and yield to many different modes of treatment.

“ From all this it by no means follows that there are not in medicine certain general views, and fixed principles ; on the contrary, in the treatment of every case we act upon them. They are precisely the views taught by the beautiful doctrine of indications, (inductions?) which can alone guide us in the treatment of fevers, and of diseases in general. The doctrine, then, to which I have been led by my own experience, and by the history of medicine, and which I have always held and advocated, is that of *eclectism*.

“ Its methods are analysis and induction ; its aim, the wide and complete interpretation of facts, its result, the understanding of indications, with the knowledge of the best modes of fulfilling them. In short, it is the logic of facts, enlightened by the logic of thought. Yet to many this method is unpalatable : some are too impatient, some too indifferent ; while others are incapable of pursuing continued trains of reflection. I am led,



then, by my long and unwearied labors on this subject, to the following results :—

“1. Individuality is an invariable element in pathology. A disease is not a simple, fixed, and uniform entity ; it is a series of varied and changing actions ; therefore every exclusive theory is absurd in pathology, and every absolute method repugnant to therapeutics.

“2. Numerical and statistical calculations, open to many sources of fallacy, are in no degree applicable to therapeutics.

“3. The only methods admissible in practical medicine are those of analysis, logic, and induction.”—*Gazette Medicale, & American Journal*.

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*Imperforate state of the Uterus.—Pregnancy at full period.—Delivery.—Cure. By Mr. TWEEDIE.*

ELIZA P\*\*\*, aged from 23 to 24, in the ninth month of her first pregnancy, entered GUY'S Hospital the 14th November 1836. Mr. ROE, the physician of the ward, saw her at 7 o'clock A. M. The preceding evening the pains of parturition had manifested themselves with great force, and remained very violent at the moment of the visit. After waiting some hours, Mr. ROE touched the woman but was unable to discover the neck of the uterus. Mr. TWEEDIE was called at 2 o'clock P. M. Upon examination he found in the vagina a solid, uniform, globular mass, pushing this canal before it at each pain. No irregularity could be perceived upon the surface of this tumor, every attempt to reach the neck of the uterus was useless. The woman having been constipated for some days, a dose of oleum ricini was prescribed, and some hours suffered to elapse.

In the evening the expulsive pains were of extraordinary force : the purgative had operated. Touching per vaginam was again practised, but without any result. At each pain, however, could be felt before the tumor above indicated, a globular body forming a prominence like the head of a child in an imperforate uterus. By touching with great attention, a small point thinner than the surrounding parts, but smooth, uniform and without any orifice could be felt at the place which the neck of the womb should have occupied. By pushing the mass towards the abdomen, the head of the child was distinctly felt, by its movements in the liquor amnii.

The previous history of the case furnishes the following details. The woman was married the 4th February 1836 : from the age of 14 she had menstruated every three or four weeks ;

the blood was always pale, in small quantity, and continued only two or three days. The menstruation had never been painful. From the period of her marriage, the catamenia had disappeared. The woman had always enjoyed robust health both before and after marriage, but coition had always been painful to her. Two or three days before the commencement of labor, she had experienced hemorrhages from the vulva by which she had been frightened.

The following diagnosis was made:—pregnancy of nine months shewn by hypogastric auscultation, (the pulsations of the fœtal heart doubly as frequent as those of the mother's,) complete absence of the neck of the uterus; very violent expulsive pains.

In this state of things, Mr. ASHWELL was called in. He confirmed the preceding diagnosis, and thought it was necessary to practise immediately an artificial opening in the thinnest part of the tumor. The pulse was from 120 to 130 per minute and very irritable; the pains violent; the skin alternately hot and cold; the countenance expressive of anxiety and despair.

Mr. ASHWELL operated in the following manner. The woman having been suitably placed and the bladder emptied, the accoucheur introduced the index finger of the left hand into the vagina, along this finger a curve pointed bistoury was glided. The tumor was first punctured at its thinnest and most prominent part, and then incised from below upwards, and next from above downwards, or from the rectum towards the bladder, and vice versa. After the latter incision, some drachms of fluid and black blood escaped, followed by the liquor amnii. The head was instantaneously presented to the opening that had just been made; this opening presented one and a half to two inches in diameter, and about one line in thickness.

Mr. ASHWELL was unwilling to incise transversely, from the fear of wounding the branches of the uterine arteries. After the operation, the pains were somewhat appeased, but soon returned; the head, however, did not advance. Three or four hours afterwards a laceration of the opening occurred, and the woman fell into a syncope. (Ether, ammonia, opium, prescribed.) In two hours the pains resumed their former vigor. By touching, it was ascertained that the laceration was confined to the uterus, that it did not affect the vagina; the head engaged more and more in the opening, and the woman was delivered happily at 11 A. M., 24 hours after the operation. The child was of the male sex, and in a state of asphyxia, but was soon resuscitated. Abundant uterine hemorrhage, extraction of the placenta, contraction of the uterus, cure.

By touching subsequently it was ascertained that the neck of the uterus was entirely absent. At the superior extremity of

the vagina existed after the operation, an orifice puckered and irregular at its circumference, soft, with thick margins, irregularly circular, denticulated; it might be compared to the base of an apple, or rather to the summit of a pear, represented by the uterus itself. By passing the finger around the circumference of the orifice, three rays or seams like the lines of adhesion, could be felt, one directed anteriorly, toward the right ilio-pubic articulation, and reflected upon the vagina—the second directed posteriorly toward the left sacro-iliac articulation, and reflected also toward the vagina, and the third shorter than the preceding, presenting only an inch in length, was directed to the right and posteriorly.

This case though not unique, is nevertheless rare and interesting. The author remarks with propriety, that the artificial opening should be practised soon before the spontaneous laceration of the womb occurs. By art we make an orifice in the most suitable place without invading either the vagina or the peritoneum, and the accouchment takes place successfully, both for the mother and child, while every thing is uncertain and dangerous if the formation of the new passage be left to the blind efforts of the pains, the woman would then be placed in the same perilous condition as in lacerations of the uterus in general. It would be curious to know what was positively the state of the womb before conception, and how the woman could have been impregnated without an uterine orifice. Whence came the menstrual fluid? Was not the os uteri obliterated probably after conception? These are doubts which the author has not sought to dissipate.—*Gazette Médicale*.

Not having received the English announcement of the above case, we have extracted it from the *Gazette Médicale*. Although from the highest British authority in obstetrics—ROE, TWEEDE, and ASHWELL, we give it only as a *possible* case, as regards the actual occlusion of the os tincæ; but it may be useful in demonstrating, in connexion with other similar operations, as well as those which have been frequently employed for dilating the natural orifice of the uterus in cases of extreme and fixed rigidity, the safety of delivery by incision of the os, or cervix uteri.

The editor of the *Gazette Médicale* seems to “be curious to know what was positively the state of the womb before conception, and how the woman could have been impregnated without an uterine orifice? Whence came the menstrual fluid? and if the os uteri was not probably obliterated after conception?



It is evident from the first of these inquiries, that the flimsy, irrational, sympathetic doctrine of conception, as well as that of the absorption of seminal matter from the vagina by absorbent vessels, which anatomy cannot demonstrate, are alike and justly without a footing in Paris.

We cannot take to ourselves the right to deny things which rest on such human testimony as we would receive freely in other matters, however strange the alledged facts, *merely* because they were not presented to our own senses. Such an assumption, would, if adopted by men, always clog the wheels of science, so as at least to make it stationary if not retrogressive. But whilst experience and observation may in many cases prove fallacious, sound reasoning from well established premises is productive of mathematical certainty. We repeat, that we give this case as one which we will not deny as *possible* because *we* did not witness it, and if we had, we might have been deceived perhaps, more easily than the surgeon-accoucheurs of *St. Guy's*. But we have many reasons for doubting the correctness of the diagnosis so far as relates to the occlusion of the os uteri, in any such case, and particularly in that which is before us. Amongst them are the following, which we deem sufficient to justify the view we have taken :—

1. We consider the doctrine of conception now settled, at least so far as to establish the fact of the admission of the male element into the uterine cavity. This being the case, conception could not have taken place without a competent opening from the vagina into that cavity: but conception did take place, therefore the existence of the os uteri at the time of conception is established.

2. If the os uteri existed at the time of conception, and did not at the completion of gestation, it must have closed itself sometime during the pregnant state. But every one who is familiar with the diseases of the uterus must be aware, not only of the want of tendency in the os uteri to adhere and close its opening; but of its exhibiting, on healing, after wounds and ulcerations, something of a formative propensity, whereby it seems inclined, like the lips of the mouth, and indeed, like most parts, to re-develop itself more or less in its original character, This is a physiological fact, arising out of the office of the ap-

propriating powers. It is however, an office sometimes overruled by certain peculiar circumstances, such as great extent of injury peculiarity of location, &c. &c., an example of which we have in burns, &c. But the propensity tends to unite severed parts which were naturally in contact, when well disposed, as in incised wounds; and by the assistance of art, parts originally separate may be brought to unite, as in the harelip operation—the Rhinoplastic operation, &c. And we should not doubt the practicability of uniting the denuded edges of the os uteri by the twisted suture if the percolation of secretions should not prevent, nor the practicability of joining two individuals together as effectually as the Siamese brothers, by the intervention of art. This indeed was formerly the plan of making Talliacotian noses. But parts originally and properly separate, unless influenced by some of those peculiar circumstances tend to reinstate themselves more or less perfectly to their pristine formation, and to heal separately. We have occasionally treated and cured ulcerations occupying a part, or the whole of the os uteri, both in the unimpregnated state, and that of pregnancy wherein there is always a supernormal, and in a certain sense, morbid degree of excitement: in no instance of which has there been the least manifestation of a disposition to unite and obliterate the natural cavity. Indeed the great difficulty with these ulcerations is that, either in consequence of the peculiarity of structure, or the irritation common to the pregnant state, or undue irritation of the uterine substance from other causes, as prolapsus, &c., or from some or all of these jointly, there is a tendency to loss of substance during the continuance of disease. We have now in our notes, a drawing, taken from a speculum view of the cicatrix at the upper part of the vagina, where at least the lower half of the uterus had been lost by ulceration caused by prolapsus, before it could be healed. Even with this destruction of the labiated part and cervix, the lower extremity of the remaining fragment of the uterus healed even with the plane of the vagina at that part, leaving a round hole in the otherwise smooth vagina, corresponding with the cavity of the neck, and about the size of a large swan quill—conforming itself very well to the natural opening at this part of the uterus.

We have the drawing of another specular view of a case in which the posterior wall of the uterus was destroyed nearly to

the fundus, and the anterior, to about the middle of the neck ; thus leaving an eschar in an oblique longitudinal direction, from above posteriorly and near the fundus, downward and forward to the fore and middle part of the neck, exposing all the remaining portion of the uterine cavity. The fragment of the uterus healed over in this shape, leaving the inner face of the uterine parietes a little excavated, and assimilated to the adjoining healed edges of the parietes. It is therefore not in the least probable that the orifice was obliterated after conception and during gestation. The conclusion therefore appears to us very evident from the weight of these facts, that the occlusion declared, did not exist.

3. The anterior obliquity of the uterus, in some degree, by which the axis of this organ is thrown at an angle more or less considerable in that direction, with the axis of the superior strait of the pelvis, is one of the most common circumstances met with in the practice of midwifery. This is often in a very small degree ; but in most cases sufficient to retard more or less, the second stage of labor, and to render the correction of this obliquity by drawing the os uteri forward, necessary to the most prompt and favorable result. But we often meet with cases in which the os uteri cannot be found by manual examination, because it is too high in the posterior region of the pelvis,—rendered so by an extreme anterior obliquity ; and the head of the child, having descended low in the cavity of the pelvis, carrying before it the anterior paries of the cervix, greatly extended and attenuated by the powerful impress of the expulsive parturient efforts—giving to the touch a very good resemblance of a large pouch of the waters, or membranes covering the fœtal head in a complete delatation of the os uteri. In such cases we have sometimes been utterly unable to find the os uteri until the protruding part of the uterus, and of the fœtus were returned sufficiently through the superior strait, to enable us to find the os uteri about the sacro-vertebral junction. In this case, all the expulsive efforts are expended against the wall of the uterus which is presented to the cavity of the pelvis, instead of the os uteri which is turned towards, and against the upper and posterior part of the bony pelvis. This, in various degrees, is one of the most common causes of tardy labor, and of the loss of pains;



and the correction of which will render almost any labor more expeditious, and preserve the energies of the patient from more or less unnecessary exhaustion. But with a proper understanding of its nature, and the condition of the parts it is susceptible of almost instant correction even in most of those cases in which it exists in an eminent degree, by drawing forward the anterior part of the os uteri and retaining it so with the finger until the bag of waters so protrudes as to supply the place of the finger, which is generally soon the case.

4. The appearances of the part after recovery, such as the absence of the neck, &c., afford pretty conclusive evidence that the part incised in the operation was that part of the parietes of the uterus which is so often protruded into the cavity, and even to the perineal strait by the head of the child in anterior obliquities.

Much more might be said on this subject, but we trust the present will suffice to guard practitioners against the hasty performance of a dangerous section of the substance of the uterus, when both safety and expedition are better secured without it. This is another of those cases, but too common in hospital practice which tend to assure us of the great inhumanity attending that hasty and generalizing practice commonly pursued in extensive infirmaries.

Since preparing the above article for our pages, the November No. of the *American Journal* has come to hand, detailing the same case from *Guy's Hospital Reports*. We cannot repeat the article, although it may possibly be more correct in some particulars. But we give below an extract from the *London Medical Gazette*, subjoined to the above case in the *American Journal*, which is valuable and interesting.

JOHN NORTH, Esq., in an interesting article in the *London Medical Gazette* of the 10th of June, 1837, expresses some doubts of the real nature of the above case, as there are so many cases on record in which the uterus has been supposed to be imperforate at the time of labor, but, upon subsequent examination, it has been ascertained that the os and cervix uteri, had escaped detection, in consequence of their mal-position. In some of those cases after delivery had been effected by incisions into the uterus, upon the presumption that there was no os uteri, both the os and cervix uteri have been found in their natural

situation, and naturally constructed. Mr. NORTH observes, "that there are some circumstances connected with this case, which I confess I cannot comprehend, and which seems to render the assumed fact of the uterus being imperforate scarcely conceivable. The complete closure of the os uteri must of course have taken place after conception, and as far as I know could only result from some disease, some active inflammation of the os or cervix uteri at some period of pregnancy, which in this instance could not have existed, inasmuch as it is stated that the patient "both before and subsequent to her marriage has had robust health." The doubts that have been expressed by the highest obstetrical authorities as to the fact of the absence of the os uteri in many of the cases in which this rare anomaly had been presumed to exist, apply exactly to this case, as far as can be judged from the report given of it. For example, BAUDELOQUE asks,\* "A quoi pourroit-on l'attribuer, (l'obturation de l'orifice de la matrice) chez les femmes où l'on a cru la rencontrer au moment de l'accouchement? à l'inflammation, sans doute, et à l'altération du col de la matrice. Mais rien ne fait *presumer que chez elles de telles affections aient lieu pendant la grossesse.*" DESORMEAU† says, "Pour que l'orifice de l'utérus s'oblitére et s'efface pendant la grossesse, *il faudrait* qu'il se fût développé une inflammation assez vive, ce qui ne peut arriver que très rarement; or dans la plupart des cas *on ne parle pas d'inflammation.*" Lastly, VELPEAU‡ thus states his opinion upon the subject: "Il n'y a évidemment qu'une maladie grave, une inflammation aiguë, qui puisse fermer ainsi le sommet de la matrice entre la fécondation et le terme de l'accouchement. Dans ce cas, les parties sont *nécessairement* le siège d'altérations concomitantes *propres à lever tous les doutes. Les signes anamnestiques auraient d'avance éveillé l'attention.*" In these quotations, I have taken the liberty of italicising the opinions of the distinguished writers which are directly opposed to the closure of the os uteri at the time of labor in a patient who "had not had a day's ill health," and who was always fit for an "unusual degree of laborious exertion." The report of the case states, that "for two or three days before labor came on, she noticed a rather copious discharge that continually drained from her." From whence, if not from the uterus, and through its natural opening, the os uteri, is it probable that this "rather copious discharge" proceeded?

"The whole description of the case," he adds, "is exactly similar to many I have seen, and to still more described by vari-

\* Journal General de Med. t. 25, p. 42.

† Dict. de Med. t. 15, p. 190.

‡ Accouchemens, 2nde edit. t. 2, p. 216.

ous writers, where the os uteri could not be detected by any ordinary examination, or even by the introduction of the hand, until after many hour's duration of severe labor pains, in consequence of there being so great a degree of anterior obliquity of the uterus as to throw the cervix and os uteri back towards the sacrum, or even above the sacro-vertebral angle. I confess that more than twenty years ago I was much perplexed by two of these cases that occurred to me. In the words of VELPEAU, "I dreamt of anomalies, and knew not what to think." In several such cases I have subsequently known other practitioners at fault, and who fancied from "the firm, uniform, globular mass forcing down into the vagina" upon which no orifice could be detected, that there really was no os uteri. By patience, however, and proper management, the efforts of nature, and sometimes, though very rarely, manual assistance, which in such cases is seldom required, the os uteri has been brought into a more favorable position, and the delivery has been safely, though very slowly terminated.

"If the pelvis is large, the uterus is in such cases forced into its cavity by repeated and violent pains, which have little or no effect in dilating the os uteri, in consequence of its being out of the line of direction of the expulsive force. The anterior and inferior part of the body of the uterus may even approach the os externum; the head of the child, or any other part that presents, being distinctly felt through the thin and distended uterine parietes. In such instances, either of two mistakes have often been committed. In the first place, it has often been thought that there was no os uteri, because it could not be detected by any ordinary examination with the fingers, however carefully conducted. Secondly, it has as frequently been supposed that the labor would be speedily terminated when it had scarcely commenced, for the head of the child is felt so distinctly, although still covered by the thinly expanded uterus, as to lead to the belief that the os uteri was entirely obliterated, although it was little, if at all dilated. I will refer to a few authorities for the purpose of corroborating the opinions I have given; of showing how cautious we should be in presuming the uterus is imperforate, and also of showing how completely the most experienced practitioners have been deceived in their diagnosis of such cases. DENMAN\* says, "Cases have been recorded, in which it was said that the os uteri was perfectly closed, and in which it has not only been proposed with a pair of scissors to make an artificial opening instead of the closed natural one, but the operation has been actually performed." "I am persuaded there has been an error in some of these cases, and that what

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\* Midwifery, 7th edit. by WALLER, p. 241.



has been called a perfect closure of the os uteri has not been such, but that the practitioner has, at perhaps an advanced period of the labor, been unable to discover it by reason of its obliquity." DEWEES\* thus strongly expresses himself: "Within our own knowledge, this case (anterior obliquity of the uterus) has been mistaken for an occlusion of the os uteri, and where, upon consultation, it was determined that the uterus should be cut to make an artificial opening for the fœtus to pass through. They thought themselves justified in this opinion, first, by no os uteri being discoverable by the most diligent search for it; and secondly, by the head being about to engage under the arch of the pubes, covered by the womb. Accordingly, the labia were separated, and the uterine tumor brought into view: an incision was now made by a scalpel through the whole length of the exposed tumor, down to the head of the child. In due course of time the artificial opening was sufficiently dilated to give passage to the child. The woman recovered, and to the disgrace of the accoucheurs who attended her, was delivered *per vias naturales* of several children afterwards, a damning proof that the operation was most wantonly performed." DESORMEAUX† gives evidence to the same effect. KILIAN‡ remarks, that in cases of supposed closure of the os uteri, the practitioner must be very much upon his guard, and very mistrustful of himself, for the diagnosis is by no means easy. Jørg,§ in commenting upon "*der schief heit des gebärenden uterus*," obliquity of the pregnant uterus, observes, that it often causes great perplexity to the practitioner, who, in consequence of not being able to feel the os uteri after many hours' duration of severe labor pains, *commonly* believes that the uterus is imperforate. BAUDELLOCQ,|| in a very instructive paper on the subject, gives several cases in which mistakes were committed, and needless operations performed by experienced practitioners. VELPEAU¶ says, that he has so frequently known tolerably experienced practitioners affirm that there was no os uteri, when it was merely raised towards the sacro-vertebral angle, that he has no difficulty in referring to this mistake the *majority* of cases of supposed obliteration, and that for beginners the anterior obliquity of the uterus is very embarrassing; "*ne trouvant pas de col, ils r-vent des anomalies, ou ne savent que penser*." He mentions the following case, which is quite in point. It happened to one of his

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\* System of Midwifery, p. 90.

† Dict. de Medecine, t. 15, p. 189.

‡ Die Operative Geburtshülfe. ERSTEE BAND, 259.

§ Krankheiten des Weibes, ZWEYTE AUFLAGE, 690.

|| Journ. Gen. de Med. t. 52, p. 34, et seq.

¶ Loc. cit. 216 and 229.

friends, who had practised three years, "avec distiction dans la capitale." The account was transmitted by letter to VELPEAU. I do not presume to offer this as the counterpart of any other case, although, no doubt, its fellow might be found. I will not spoil it by translation. "J'ai passé la nuit près Madame de S.; le travail paraît marcher régulièrement; mais je ne trouve point l'orifice; j'ai porté le doigt vers le promontoire, puis du côté des fosses iliaques, puis en avant derrière le pubis; partout je suis arrivé jusqu'au cul-de-sac formé par l'extrémité supérieure du vagin; mais je n'ai point trouvé le col; qu'ai-je à faire, qu'est-ce que cela veut dire?" VELPEAU thus clears up the mystery: "C'est qu'en effet l'orifice était tellement porté en arrière et en haut sur la tumeur, que pour l'attendre, il fallait recourber le doigt en crochet tout-à-fait en avant."

"The patient whose case is related in the Guy's Hospital Reports was in labor with her first child. It is true that so great a degree of anterior obliquity of the uterus, as to lead to an erroneous diagnosis at the time of labor, occurs much more frequently in women who have borne many children, in consequence of the abdominal parietes having lost their power by frequent distension, of supporting the gravid uterus. But it may and does happen occasionally in first labors, either from a natural flaccidity of the abdominal parietes, from the brim of the pelvis being inclined more forward than usual, or from an unusual convexity of the lumbar portion of the spinal column. It is stated in the case I refer to that a careful investigation was made about a month after delivery, and that there was no cervix uteri. In a case related by LAUVERJAT,\* in which he and many other practitioners fancied there was no os uteri, and in which, consequently, an incision was made into the uterus, neither the os nor cervix uteri could be detected for two months after the operation. "L'un et l'autre alors étoient dans l'état le plus naturel."

The doubts expressed by Mr. NORTH, concerning the nature of Mr. TWEEDIE's case, may be unfounded; but at all events, the facts mentioned by the former, may tend to guard young practitioners against hastily assuming that the uterus is imperforate at the time of labor, and to impose upon their minds the difficulty of the diagnosis in a description of cases which are generally not sufficiently dwelt on by medical teachers.

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\* Neue Methode den Kayserchnitt zu machen, 188. Quoted by BAUDELOCQUE, loc. cit. p. 45.

*Cancer of the Lung.* By M. HEIDELFER.

Cancer of the lung is a very uncommon disease in comparison with other affections of this organ. But of all the cases of this disease, none present more indubitable characters than the following. We believe that a tuberculous infiltration, may be, and has been more than once mistaken for cancer of the lung ; in this case a similar error could not have existed.

A peasant aged 24, strong and robust, who, except the diseases of infancy, had never been affected by any others except the itch, was attacked towards the autumn of 1834 by pleurisy, which yielded to an antiphlogistic treatment. In the month of December a similar attack occurred, of which he was not so completely relieved by the same means.

A new exposure to cold and improper diet aggravated his condition. The left side of the chest became the seat of very intense and apparently electric pains, which the patient felt from the shoulder to the false ribs, and from the sternum to the vertebral column. Sanguine depletion, both local and general, revulsives and soothing means were once more employed. The following was his state at this period : decubitus upon the back ; the left side of the chest somewhat elevated ; frequent, dry and short cough—accompanied with dyspnœa ; the left side of the chest immovable in inspiration and expiration. The sternum was elevated and pushed towards the right side, a very observable difference existed between the right and the left side of the thorax, the latter presented a considerable dilatation immediately above the mammilla ; sound upon percussion, dull on the left, and very clear on the right-side, no respiratory sound on the left side, where the pulsations of the heart were also inaudible, but were heard with great distinctness but unequally on the right side. The face of a livid color, with an expression of agony, the breath pure, or at least without any bad odor, the emaciation inconsiderable.

A month later the state of the patient was greatly changed ; the anterior part of the left side of the thorax presented a considerable tumour, of the volume of two fists ; it was hard and tuberculated. The patient could not repose upon the right side ; the left was immovable during inspiration ; the color of the face still more livid, leaden, and the expression of agony more pronounced.

Two months before death, the axillary glands of the left side began to enlarge and be indurated ; at the same time two tuberculated tumours were formed above the left clavicle ; the symptoms of general dropsy supervened and the patient died, having to the last a cough with a glairy expectoration.



Autopsy, externally, a considerable arched prominence of the left side anteriorly, and containing several tumours soft and hard; the mamilla was engorged and inflated.

Nothing remarkable in the Encephalon.

The right side filled with water; the right lung adherent to the diaphragm and pericardium contained no tubercles. The heart rather small than large, was adherent to the pericardium in all its dimensions, was flaccid, softened, and almost gelatinous. The left lung adhered to the ribs, presented no distinct lobes, but formed a single mass which filled entirely the left side and even a part of the right side of the thorax. The pleura could not be distinguished. This lung was transformed entirely into a compact, lardaceous mass, of a dirty white color, in which could be perceived no trace of bronchea or of vessels. Near the center this mass was softened, encephaloid, of a greyish white color, and within it was seen an opening arising from the non-consolidation of a large broncheal tube. The arteries and veins were obliterated and transformed into ligaments as they proceeded from the heart. An incision in the external prominence of the left side presented besides the skin and a thin layer of cellular tissue, a compact and lardaceous mass, softened near the centre and converted into a soft and encephaloid matter, which communicated with the interior of the lung through the intercostal spaces, the ribs having been pushed from above downwards. Here existed no trace of pectoral or intercostal muscles and the ribs of the left side were in a state of complete atrophy.

The liver, spleen, pancreas, kidneys and bladder were in a normal state, the mesenteric glands engorged, and through the digestive mucous membrane were disseminated red and softened spots, but without any ulceration.

The left testicle and epididymis presented an incipient schirrous induration.

The author informs us that in the cases recorded by M. M. ANDRAL, VELPEAU, and BEGIN, the disease was not detected until after death. However, it seems to us, that the prominence of only one side with dullness of sound, the lancinating pains, the livid and leaden color of the skin, and the presence of two tumours above the clavicle should at least have directed the attention to the possibility of a cancerous affection of the lung. The author informs us that the schirrous state of the testicle and epididymis was not ascertained until after death. Is it necessary to say with him that the etiology and treatment of this kind of degeneration are at the present day beyond the power of the art? Ed. of *Gazette Médicale de Paris*.—*Gazette Médicale*.—*Archives de Médecine*.

*Fisk fund prize Dissertations of the Rhode Island Medical Society.—No. 1.—By THOMAS H. WEBB, M. D., Providence.*

(Communicated for the Boston Medical and Surgical Journal.)

*What are the causes and nature of Rheumatism, and the best mode of treatment to be employed therein?*

It is not a little strange that the credulity of men, and of physicians particularly, should manifest itself in believing little evidence, or partial testimony, where the facts of multiplied and long continued observation are also in review. We are induced to attribute this result however, more to the present unprecedented reign of novelty mania, than to the operations of credulity itself; for this alone, we think would, from the very nature of things, although readily captivated by small or weak, be still more easily, by greater or stronger evidence. But the operations of the rage for novelty, for we can call it nothing less, is most unaccountable, if we set out on the investigation, with a due contemplation of the natural organization, if we may so speak, of the human mind; for here we find such an ill proportionate relation between the perception and the judgement that, when sufficiently removed from the intellectual process of ratiocination to contemplate it abstractly from the interest we take in the result, we are forced to consider it within the proper scope of the term mania.

We see this strange evidence of ill-balanced intellect exhibited in a thousand ways; and in some way, by almost every body. We see it in the most common concerns of life, as in the servile following of fashion in the destruction of the beautiful symmetry of the female form, and the more valuable possession of the ruddy glow of fine health, by the criminal (if slow suicide be criminal,) use of corsettes—in the imbibition of wine and other forms of alcoholic drinks into the human stomach without necessity imposed by disease; and all this, with the perpetual observation of the injurious effects of the former and the latter, and the ruinous—almost certain demoralizing tendencies of the latter. And when we witness these things, and reflect on the eventful and important nature of those legitimate

inductions to which the human mind is by nature entitled—the happy consequences of correct, and the ruinous tendency of incorrect or unfair ones from the whole promises, we are led to conclude that, in a science like that of medicine, every step in the correct theory, as well as the practical operations of which must, in order to be profitable, be at the expense of a fair and proportionable deduction from the *whole* of the real promises, there is no branch of study so essentially collateral, or perhaps we should say adjuvant or auxiliary as logic, or the correct use of the reasoning faculties. There is as due a proportion between effect and cause in the science of medicine, as in any thing else which comes within the perview of mental operations. But it is alleged that we may not know all the premises. To this we reply that we should see a due proportion, which always exists between one set of phenomena and another which we have reason to believe stand in the relation of cause and effect, before we draw our deductions; and if we do not see this proportion, search for it alone, or with assistance until we find it. And again: if in some matters, the whole elements of a process of reasoning cannot be precisely determined, still it is no less the duty of the physician, *under the necessity of the case, when human powers ultimately fail*, to use in his ratiocinations, all that are known, than it is not to neglect any part of the whole which may be well ascertained.

It is not so strange that men should reason widely, or rather put induction entirely out of their catalogue of mental operations when they undertake to tamper with those sciences of which they know nothing from which to reason, as is unavoidably the case with imposters who attempt the practice of medicine without a knowledge of the anatomy, the principles of life, and the healthy and diseased functions: for there is no true reasoning but from true and well ascertained premises; and “what can they reason from but what they know?” And this, we may remark is constantly done by the impostors of the day, who measure well the intellects of those whom they mean to gull, and calculate the success of the imposition as accurately as did the London Quack, who upon the same ground explained his own success. They know well that when men are drawn out to make actual conclusions on a topic with whose elements they



are perfectly ignorant, that the reasoning must result in error proportionate to the ignorance of the premises—then may they clearly determine their own chance of success, twenty, forty, or one hundred to one, according to the true intellectual character of the community with whom they seek favor. But with men of science, it is passing strange that a solitary, fallible man should make a declaration in the very face of the best experience and most enlightened observations of thousands—not of one age but of a hundred ages, and still this solitary declaration will be seized and tried. And not only so, but all must try; and instead of reasoning fairly beforehand to determine what is right, they reason, if at all, afterwards to ascertain why the results were not according to desire.

We have been led to these reflections by our deliberate contemplation of the Fisk fund prize dissertation on the nature and treatment of rheumatism, by THOMAS H. WEBB, M. D. This is a well written essay, and we have no possible objection to the *manner* in which it has been got up. We therefore pass over the whole of it until we come to the mode of treatment which is advocated by the author, the discovery of which stands to the credit of Dr. CAZENAVE.

It is true that in all times, opium has been more or less used by practitioners in the form of opium pills, laudanum, Dover's powder, &c., and by the common people in the form of Batemans drop, &c. &c.; but it has remained for Dr. CAZENAVE to recommend to the world the use of pure opium hourly in large doses, and these persisted in to the end for the cure of rheumatism. It will be recollected by those who have read this essay, that the author adopts, in extenso, the bold, electric practice of Dr. CAZENAVE who, knowing well the physical effects on the system in small doses, presses its use to the production of those immoderate effects which have long been, to other men, beacons of danger from the exciting powers of opium—that is to say, doses which produce nausea, giddiness, headache, palpitation, &c. But “these effects,” said Dr. C. “are of course but momentary, and should form no solid objection to the remedy if it be found beneficial in other respects, besides relieving pain.” And he proceeds, “To the above effects of opium, (if it be continued,) succeed others :—the patient does not sleep, but he expe-

riences a kind of delightful ecstasy,\* forgets his sufferings, &c. The action is then excitant like wine. In some cases an abundant perspiration is the result—but in both events, that is, with or without the sweating process, the radical cure of rheumatism is effected.” It is obvious here that the exciting powers of opium are carried beyond the sleeping point—even to the ecstasy—the stupor of intoxication, and the bold prescription persevered with until the rheumatic form of disease disappears.

Electism, as well as system in medicine has its extremes, and consequently its dangers; and we should be ever watchful of that disposition in man whereby he tends to extremes—to ultraism in whatsoever he embraces. These ultraisms in electism, generally arise from a process of reasoning instituted on partial premises; a fact which is finely illustrated in the case before us. We need not deny that Dr. CAZENAVE cured every case of rheumatism which came under his care at the foot of the Pyrenees, where no other form of disease is known—a location disposing to nothing but good—perfect health, but where temperature, nevertheless, has its effects, which are that assemblage of symptoms we call rheumatism. And we will venture this opinion, that under the circumstances inseparable from this location, the cases of this disease are much more alike, in male and female, old and young, sanguine, phlegmatic, or nervous temperaments, &c. than in any other less favored place. Nor need we deny that Dr. WEBB and his medical friends may have met with a like success in Rhode Island; notwithstanding we should think it somewhat strange if none of the injurious chronic effects of opium, at least, were subsequently exhibited in those cases; or if a mere metastasis instead of a cure were not the result. But we may contend that the best observation of all ages, has been long since brought to bear on the too promiscuous use of opium, to which some practitioners have in all ages been inclined; and that, more especially since the days of Dr. BROWN it has been necessarily a great point of duty with the profession, to bring the practice of medicine down to the point of prudence in the prescription of this drug. The principle will hold good as long as opium continues to be an excitant, that its safe and

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\* Dr. C. should have known that so far from this being a uniform result from opium, it is only an occasional one in certain temperaments, states of systems, &c.

prudent prescription must always be subject to the various modifying influences which cannot be left out of the estimate. These modifying influences must then not be neglected, but taken into the calculation if found existing, in every individual case. The most essential of these are the temperament of body and mind ; the kind and degree of morbid action present, the organs most tending, or liable to congestion, the operation of predisposing causation as found in occupation, age, sex, climate, particular location, &c. &c. Nothing, therefore, can be more obvious than that a general formula, consisting of opium, one grain every hour until the tendency to hilarity is produced, and the still farther exciting effects have carried the patient to the calm which follows this excess of excitement, and which is caused by still farther stimulation, must be extremely unsuited to certain many cases, according to the influence of these modifiers—causes of effects which must and will have their influence in the result. It should be recollected that it is not alone the secrecy of quack medicines and practices that is objectionable. This alone might probably be gotten over by practitioners when they come to see the result of the physical agent—what medicinal operation it is its power to effect on the system : but the worst part of quack medicines and practices, as far as they have safe and efficient physical powers at all, is the universality of application, regardless of the particular circumstances of the cases. Now the same objection is unavoidable in the case before us. Hepatic derangements, impaired digestion, torpid bowels, fatal congestions, apoplexy, &c. &c. must result in a large proportion of such cases as ours in southern climates. Nor does it seem less evident to us, that upon the common acknowledged principles of excitement alone, this valuable medicine cannot be alike applicable to the extremely different states of acute and chronic rheumatism. Here it will not be denied by the impartial, that the states of excitent are extremely different. This is too plainly evinced by the whole assemblage of symptoms present. Nor is it less evident from another source of truth available in pathology, which is *a posteriori* reasoning. No one will deny but that in one case of rheumatism the most powerfully stimulating diaphoretics will prove beneficial, whilst in another these will prove injurious, and nothing short of depletion, local



or general, will meet the demands of the case. If, therefore, there be any truth in the principles of excitent, it follows that the general excitement at least is extremely different in these two cases.

But when we come to consider, and allow due weight in the reasoning process to the complicating influences of other modifiers, as occupation, temperament, &c. &c. we find still additional physiological, as well as pathological phenomena which necessarily influence the deductions. Let us take for example, a climate not only as well calculated as that of the Pyrenees, or of New-England to cause simple rheumatism, but which also affords a long and hot summer with a moist atmosphere. Here is an influence calculated to torpify the general energies of the body, and of the liver particularly. This is a truth of constant observation. If we reason from cause to effect, or from observation of the facts generally presented, we shall find that, (in whatever way,) there is a greater or less predisposition to bilious disease, and consequently, when an occasional cause is applied, as cold, instead of a simple *inflammatory* fever or rheumatism, an inflammatory *bilious* fever or rheumatism is the result. And why, but that another cause has operated in the production of the phenomena; and to which, as well as to the other causation, the resulting phenomena must bear a reasonable proportion.

Now although the same causes must, under like circumstances, always produce the same results, still it does not follow that causes differing in name may produce phenomena not unlike each other. This is a fact of observation relative to the influence of alcoholic drinks as brandy, wine and opium, as also of opium and heat on the biliary apparatus—that is to say, that opium readily induces, in a southern climate that state which the southern heat itself ordinarily produces. Under these facts then it would be as absurd to think of curing a rheumatism which is most commonly, (though not always,) what southerners would call a bilious rheumatism, by a free use of opium, as it would be to remove a patient from Augusta to Mobile, or New-Orleans with the expectation of lessening the tendency to bilious diseases.

Not willing to condemn with undue precipitation a practice

so respectfully and so ably advocated, we determined, on reading the essay, to adopt the practice urged by it in the first case of rheumatism in which, as in not a few heretofore, we should be foiled in our ordinary course of treatment according to the best judgement on the true pathological condition. But before just such a case came to hand, we found a patient so severely affected with the excruciating pains incident to this disease that, in our absence, and over the head of our prescription, he was forced to resort to doses of laudanum to lull his sensibilities and lessen his pain. With the manifestation of this disposition, and with the hope of regulating the use of opium to a safer course than might be adopted at the impulse of his distress, we laid down the course in all respects according to CAZENAVE's plan. It was pursued until forty pills were taken. By this time we found great tendency to cerebral congestion from the direct action of the opium, with hepatic obstruction, evinced by sallow skin, brownish yellow tongue, with hard, frequent, contracted pulse, &c. amounting to a very complete and *highly bilious* rheumatism, had resulted. Unwilling to press further a plan which reason, as well as the experiment thus far condemned, we discontinued the course, and in its stead adopted the use of a pill of six grains of calomel, one grain of aloes, and half a grain of kermes every six hours. This restored the wonted hepatic secretion, preserved a steady perspiration, and the patient was speedily restored to health.

With these experiments then, and the reasonings which we have had on the subject, we have been brought to the language which Dr. CULLEN applied to the use of cinchona, that we "*hold it to be manifestly hurtful, especially in the beginning, and in the truly inflammatory state*" at least; and probably generally in southern climates and bilious temperaments.

We will observe, in the conclusion of this article, already greatly extended beyond the intended limits, that depletion was liberally used, and in the early part of the case; and that great spinal irritation existed in all the extent of the dorsal and lumbar spine, and most severe in the dorsal. This received the counter-excitation treatment usually enforced for this symptom, but without being corrected. It disappeared with the rheumatic symptoms.

*Clinical Observations on opening Abscesses, delivered at La Pitié.—By M. LISFRANC.*

If you consult those books which treat of abscess, you will find it laid down as a general rule, that where the abscess is of small size, it ought to be left to nature to effect an opening, because this, it is said, will be small, and consequently leave but an inconsiderable cicatrix. According to this view, small abscesses are to be left to themselves, provided they be not too indolent, and do not advance too rapidly. But I reject this method; for if the aperture made by nature be small, why should not that made by art be made small likewise? It is only necessary for this purpose that we use an instrument with a narrow blade, and that we make a simple puncture.

Again, before opening an abscess, it has been thought that we must wait till the matter be well formed, or in other words, till the abscess be ripe, although to this some exceptions have been made, as with regard to abscesses in the abdominal and thoracic parietes, and those situated in the neighborhood of tendons and joints. I have opened such abscesses before they were well formed, and what has happened? As long as I confined myself to the method recommended in books, I did not reach the root of the malady. Convinced of its insufficiency, I attempted to combat the inflammation excited by the pressure of the pus on the surrounding soft parts, by fomentations and local bleeding. Immediately after opening the abscess, I applied leeches, which were more efficacious in proportion as the swelling was recent.

This first satisfactory result soon led me to another; sometimes the leeches partly failed, and the induration passed into a chronic state. In conformity with the principles which I laid down in treating of white swelling, I allowed this state to remain undisturbed three or four days, after which I successfully attacked it by means of frictions with ointment of hydriodate of potass and ioduret of lead, as well as by compression, when necessary.

One objection only remains to be refuted—that of the pain, which was supposed to be greater in this than in the ordinary method. It is true that the pain of the incision is a little more acute when an abscess is thus prematurely opened, but it only continues a few moments, and accordingly I hold that abscesses ought to be opened as soon as the existence of pus can be detected. I have followed this practice for fifteen years, and I need not remind you that you have yourselves been witnesses of its success.

If you have to open an abscess of small size, as for instance



that of an egg, and if the skin be thinner at the centre than any where else, you must make your opening there for two reasons; first, because the integuments being thinner, the instrument passes through a smaller extent of integument, and consequently gives less pain, and also because the incision gives to the integuments a slight degree of stimulus which facilitates their cicatrization: it is also very easy to prevent the pus from stagnating in the abscess by making pressure on its parieties. For larger abscesses it has become an established rule to open them at the most dependent part, unless there be some important blood-vessel or nerve in that situation.

If, in order to arrive at the abscess, you have to pass through a muscle, the incision ought to be made in a direction perpendicular to the action of its fibres—that is to say, that when the muscle is broad, you must cut across; but if, on the contrary, it be narrow, your incision must be parallel to the fibres, to avoid the risk of dividing it altogether. If in the case of a broad muscle, such as I first supposed, your incision were parallel to the fibres, it would almost always happen that the aperture would be completely closed by their contraction. You have lately witnessed a remarkable case, which I may quote here. A patient, in the ward of St. Louis, had a large tumor on the thigh, which not only afforded the ordinary signs of fluctuation, but evinced a distinct gurgling. I practised an incision parallel to the axis of the thigh, at the most dependent part: nothing was evacuated. I introduced a hollow sound into the wound, but still nothing came out. I then made another incision, at a point where the fluctuation was still more evident, but with the same negative result. The patient was very nervous, and his muscles contracted with force. Astonished at the circumstance, I next introduced a grooved sound along the blade of the bistoury, which yet remained in the wound; but still no pus made its appearance. My next proceeding was to make a movement with the two instruments, in such a manner as to separate them and prevent the contractile action of the muscular fibres: then, at length, the pus found an exit. I request your attention to this point, which is a very important one, for I am persuaded that it happens very often, particularly when the fluctuation is not very evident, that the surgeon, after having made his incision, erroneously supposes there is no pus, merely because the opening having been made parallel to the direction of the muscular fibres, their contraction again closes up the aperture.

Abscesses of the neck ought to be opened by means of a simple puncture. I do not now allude merely to small abscesses: I have opened, in this manner, purulent dépôts of considerable size, and, although the extent of the incision was not in proportion to the collection of matter, yet was all the pus evacuated,

while the cicatrix which remained did not exceed that of a leech bite. This precept is of great importance, not only to the welfare of the patient, but to the reputation of the surgeon, and, in this double view, merits your attention. The following is an illustration in point:—I was called, three years ago, to Belleville, to open an abscess on the neck of a young lady, which I effected in the manner above recommended. In the same house was a child, having an abscess similar to the other in situation and nature. A practitioner there opened it by an incision of an inch in length, and had reason to repent having done so; for the comparison of the two children, after the healing of the wounds, was very disadvantageous to him; the wound in his patient having healed slowly, and left a large cicatrix.

In abscesses of the neck, owing to the smallness of the aperture, the want of freedom with which the pus flows, and its remaining about the cellular tissue, there may be a little lodgement at the lower part, forming a kind of *cul de sac*, whence compression is insufficient entirely to dislodge the matter. In such case it is necessary to make a small counter opening, cutting upon the grooved canula, so as to make a second incision, no larger than the first, and thus the two look like leech bites. The same precepts apply to those parts generally which are habitually exposed. In the neck, as on the forehead, the incision ought to be transverse,—that is, in the direction which the folds of the skin naturally assume in those situations.

In those parts, however, where the appearance of the cicatrix is not an object, modern surgeons make incisions of several inches where the abscess is large; and experience has proved the advantage of this practice. The bistoury is to be held in the first position: the two last fingers, separated from each other, and extended, are to be placed, if possible, beyond the tumor, as a *point d'appui*: the tissues which are penetrated must be divided in a perpendicular direction: the middle finger, placed on the blade of the instrument, serves to regulate the depth of the incision. This is very important, for if the instrument cuts ill, or if the texture be hard, we are under the necessity of pressing more strongly on the parts to be divided; and without the precaution of having the finger as I have described, we should incur the risk of plunging in the instrument too far. Besides, it is easy to push the bistoury farther in if necessary, by drawing back the finger on the blade of the instrument. We must do all gently: thus, when the blade arrives in the collection of pus, the hand will perceive the fact, because the knife is now passing through a less resistance than before. The only exception to this is where there are muscular contractions of a nature to interfere with the resistance. I cannot well give you a measure of the slowness necessary in this proceeding; but always

remember this fundamental principle in operative surgery—*tutè* is better than *cito*.

I have advised you to make the instrument penetrate the integuments perpendicularly : this rule applies to all such punctures, and it is proper that I should point out its importance. If the bistoury traverses the textures obliquely, it will have to pass through a greater extent of them, and hence, consequently, there is more pain ; hence, also, the exit of the matter is less free, and probably we may have infiltration of the surrounding parts in consequence. Besides, in abscess on the parietes of the abdomen, there may be a hernia without any indication directing our attention to it. I was called by Dr. PIORRY to a woman who had received a kick on the belly, in consequence of which an abscess had formed there. The patient was carefully interrogated, and assured us that she had never suffered from any symptom connected with the digestive organs,—there had never been any thing indicative of hernia. However, I opened the abscess cautiously, when a gush of purulent matter escaped, and I then saw that there was a knuckle of intestine floating in the tumor. What would have happened had I thrust the instrument into the tumor with that degree of *brusquerie* which some affect on all occasions ?

An abscess deep in the parites of the chest or abdomen may be actually in contact with the pleura or peritoneum, while that in the neighborhood of a joint may reach to the capsular ligament. If, then, you open abscesses of this nature with no more precaution than what is generally adopted—and especially if the muscular contraction prevents you from judging when you have passed from the more into the less resisting part—or, if the abscess be not entirely filled, I repeat, that under such circumstances you incur the risk of penetrating the pleura or peritoneum. It is therefore imperiously necessary to open the abscess as carefully as if it were a hernial sac.

I must not forget to add, that in proportion as the incision is made, the fore-finger being introduced into it, enables us the better to appreciate the depth at which the collection of matter is situated. I know that this is painful to the patient, but the suffering is not of a nature to have any effect upon his health, and we must above all attend to his safety.

If the abscess be in the course of a large nerve or artery, you are told to make the incision so as to avoid it. But the tumefaction and induration of the parts are such, that you cannot recognise their relative situation ; and although anatomy tells us the natural situation of the vessels, yet the developement of an abscess often changes the relative position of the surrounding parts. If the artery and nerve in question always retained their wonted place, there would be no difficulty ; but, as I have said,



they are frequently displaced, and if you cannot ascertain their new position, what are you to do? Certainly, not to imitate those practitioners who, in order to conceal their embarrassment, declare the abscess to be not yet mature, and so postpone opening it. This delay may be attended with the worst consequences. If, for instance, an abscess be situated in the neck, near the carotid artery, the jugular vein, or the eight pair of nerves, or great sympathetic, in the midst of the fine loose tissue of that region, the matter may find its way into the chest, or, according to DESAULT, even into the abdomen. It is, therefore, urgently necessary to open all such abscesses very promptly, and it is now twenty years since I have adopted this method. Take the neck as an example: I there make an incision parallel to its axis, and which divides layer by layer successively the skin, the cellular membrane, and, if necessary, the superficial aponeurosis. I next take a blunt probe, and limit the extent to which it is to penetrate the textures, by holding it between the thumb and fore-finger. I then introduce this to the bottom of my incision, and make it pass on by separating or rather pushing aside, the fibres of the parts beneath. Whenever the instrument has entered the abscess, there is a cessation of resistance, besides which I perceive drops of pus oozing along the sides of the instrument. I then push it upwards and downwards, so as to enlarge the opening, and thus the matter finds a ready exit.

Such is the result of twenty years' experience, and I have never yet met with any accident from hemorrhage; I am therefore inclined to believe that those surgeons, otherwise very able, in whose hands such occurrences have taken place, have either been ignorant of, or neglected, the precautions here laid down.—*American Journal, from Gazette des Hôpitaux.*

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### *Cure for Drunkenness.*

A native of Norway, aged forty, who had from his youth been accustomed to dram-drinking, was attacked with delirium tremens. His medical attendant, to cure him of his dangerous propensity, prescribed the daily use of a mixture of two drachms, of sulphuric acid and twenty-four ounces of whiskey. The result was remarkable: in three months' time he got such a dislike to all kinds of spiritous liquors, that he could not bear to swallow a drop of any thing stronger than beer. The dose of the above mixture taken was four wine-glasses daily, and the cure had been of a year's standing at the time of the communication of the case.—*Elyr. Tiende Bind. andet Hefte.—Eclectic Journal.*

## PART III.

## MONTHLY PERISCOPE.

*Belladonna in Ileus.*

We have, on former occasions noticed some of the important uses of Belladonna. Its safety and benefits continue to be more and more developed by the enterprising practitioners of the present age; and important and extended as they now are, it is still difficult for the mind to contemplate a limit to its application to disease. Nor is its worth to be estimated by considering it merely as a convenient substitute for other things, or as a general prescription, or one ordinarily resorted to in cases wherein other articles of less power or less danger under circumstances of abuse or misuse in any way, would answer the demands of the case; but is most signally displayed when brought into use as a kind of forlorn hope—a dernier resort. It is in those cases wherein other medicinals fail of the desired end—wherein they have been used ineffectually; or for purposes wherein their use is precluded by the circumstances of the case—it is in *short*, in the earnest demand of the otherwise hopeless necessity of the case, that its signal virtues are brought to the aid of humanity. A few instances amongst many such, are many rheumatic and neuralgic pains, constriction of the urethra and of the rectum, obstinate resistance of the os uteri in labor, inflammation of the iris threatening obliteration of the pupil, &c. with its use in the operation for cataract.

The preparations in which this medicine is used are various, and afford great facilities in prescribing it. Indeed, the practitioner has little to be watchful of in its use, but to avoid excessive doses in internal use. Those mostly in use are the extract. (*Extractum Belladonnæ*, U. S.) The leaves, however, are retained by most of the Colleges, and the root also by the Dublin. It is given in infusion, substance, and extract. The leaves are

generally used when it is given in substance; the leaves or root, when used in infusion, and the extract is given internally in substance or solution, and applied externally in solution, plaster, and ointment. This extract, (*Succus inspissatus Belladonnæ, Dub.*) is a variable preparation, owing probably to the different proportional results of the preparation in different hands and perhaps at different seasons; as in BRANDE obtaining four to six pounds of extract from one cwt. of fresh Belladonna, whilst M. RECLUZ obtained nearly ten parts from one hundred. It is probable that the difference consists, not so much in the quantity of extract afforded, as in the other substances extracted with it from the Belladonna, making the increased result of the latter: consequently, until the particular preparation used is well known, it becomes prudent to begin with under doses, as one quarter to one half grain three times a day, and increase to decided effect. The infusion is made of  $\mathfrak{z}\text{i}$  of the leaves to  $\mathfrak{z}\text{x}$  of boiling water. The ointment, as first directed by CHAUSSIER, and which has continued in use, is made of  $\mathfrak{z}\text{ij}$  of the extract to  $\mathfrak{z}\text{i}$  of simple ointment, (for summer, or  $\mathfrak{z}\text{j}$  prepared lard, for winter.)

The plaster, (*Emplastrum Belladonnæ*) is made of 1 part extract, and two parts of soap plaster.

We have again turned our attention to this valuable article, in consequence of noticing in the last No. of Dr. BELL's invaluable *Electric Journal of Medicine*, a work which should be in the hands of every medical man, an interesting account of the use of Belladonna in Ileus, with cases illustrative, reported by Dr. WAGNER, district physician at Schlieben. We will give the substance of the cases, as they alone can best illustrate the decided power of the medicinal agent under consideration.

\* "CASE 1. On the 21st April, Dr. LOHRENZ of Schönewalde visited a man aged 23, who had been complaining, since the 19th, of violent pains in the umbilical region. Pains came on periodically, and were so excruciating on pressure that the patient screamed out when touched. Incessant retchings, belly hard and tense, and had been several days without an alvine evacuation. Venesection, leeches, enemata and various other external and internal remedies were employed without any effect. Symptoms increased in intensity, and on the 22d, had subsultus, syncope, and vomiting of feculent matter. Belly tympani-



tic, hard and painful ; bowels obstinately costive, pulse scarcely to be felt, anxiety intolerable, and body covered with a clammy sweat.

Under these circumstances, Dr. LOHRENZ had recourse to a clyster of Belladonna. One half of this lavement was first injected ; and unlike the other enemata which were almost instantly rejected, this was retained, with a marked effect in calming the violence of the symptoms. The countenance became more cheerful, and the abdomen softer, but the pupils became greatly dilated. Half an hour afterwards the second half was injected, and produced a most decided improvement. It was speedily followed by copious evacuations from the bowels, the pulse rose, pain and vomiting ceased, and next morning the patient felt quite restored, and had no return of symptoms."

"CASE 2d. On the 14th June, Dr. WAGNER visited a laborer's wife, aged 40, spare habit, but otherwise robust and healthy. She complained of a violent cutting sensation in the bowels, with obstinate costiveness, and incessant vomiting. She had had repeated attacks of the same description before, but much milder, and of brief duration. On examination there was found a hernial tumour in the right groin about the size of a walnut, and so excessively tender on pressure, that she could not bear the slightest touch. Belly tympanitic and tender, pulse small and rapid, face pale, body moderately warm. A large venesection, and all the usual internal remedies, (except quicksilver,) tried without any effect ; as well as clysters of all kinds. Patient refused to submit to a second venesection or the application of leeches, and rejected altogether the proposal of an operation. On the 5th all her symptoms were increased, thirst excessive, fecal vomiting, and suppression of urine. In this state of things Dr. WAGNER had recourse to Belladonna clysters. He infused  $\mathfrak{z}\text{i}$  of the root of Belladonna and  $\mathfrak{z}\text{i}$  chamomile flowers, (he does not say how long,\*) in  $\mathfrak{z}\text{xij}$  of water, and divided the infusion into three parts. The first part was administered by himself as soon as it was sufficiently cold, and produced very remarkable effects. Nausea and vomiting instantly ceased, and half an hour afterwards the belly was soft, and without much tenderness or pressure, hernial tumour much less tender, though still painful. No secondary bad effects were observed. At noon she was found quite easy and contented, but with dilatation of pupils. She told him that she had been threatened with a repetition of the attack about half an hour before, but that she had stopped it by *drinking a few spoonfuls of the clystric mixture*. In the evening Dr. W. found her complaining of a return of the

\* We consider this instruction sufficient ; an infusion was made, and of course, according to the ordinary rules for making infusions.

abdominal pain and tension ; and as there was no indication of the secondary effects of the Belladonna, except some dilatation of the pupil, he administered the remainder of the infusion.

The patient passed a quiet night with the exception of some troublesome dreams, and, on the following morning the abdominal symptoms were mild and inconsiderable, except that the hernial sac remained extremely tender on pressure, and the incarcerated portion of intestine could not be replaced. At noon, the soreness and tension of the belly increased again, and as no alvine evacuation had as yet taken place, and there were no apparent bad consequences from the belladonna, Dr. WAGNER, repeated the infusion as before. The first dose produced the usual tranquilizing effect, but no farther change ; and as the constitutional effects were limited to some increase in the dilatation of the pupils, with unpleasant dreams, he administered the second portion, and towards the evening the third and last. On the morning of the 7th, the hernial sac had disappeared—loud borborigmi were heard in the abdomen. But the patient after having been annoyed the whole night by frightful dreams, was suddenly seized with such furious delirium that several strong men were required to hold her. Her eyes were fixed and sparkling, pupils excessively dilated, conjunctiva injected, cheeks of fiery red, pulse small and rapid and scarcely to be felt—*deglutition impeded*. She saw nothing but strange phantoms, which she sought to drive away by abuse and threats, and searched for concealed enemies under her bedding, clothes, and furniture—believed herself perfectly well, wished to resume her labors, pulled on her clothes with furious violence, and would have rushed out of the house but for restraint by force. Dr. WAGNER ordered enemata of vinegar, (which were followed by copious evacuations,) and gave vinegar with strong coffee internally, of which she drank large quantities with much desire. Cold lotions applied to the head, and the limbs washed with vinegar, an operation which the patient herself performed with much apparent satisfaction, washing herself with vinegar from head to foot.

This state of things continued until the morning of the 8th, when the patient became rational and composed, but complained of flashes of light, and various other optical phantasms, with a sense of great weight and pressure in the head, and a general feeling of soreness and exhaustion particularly in the feet. She recollected distinctly every thing she had done during the preceding day and night, and said the horrible phantoms around her, compelled her to act as she had done. On the 9th, she complained only of weakness, which soon disappeared, and she recovered rapidly without any further unpleasant symptoms."

"CASE 3rd. On the third of July a smith, aged 59, was at-

tacked with enterodynia, vomiting, tympanitic swelling of abdomen, and constipation. Dr. WAGNER found an incarcerated hernia of the left groin, about the size of a hen's egg, and extremely sore to the touch. All external and internal remedies—repeated local and general bleeding and frictions over the abdomen with extract. *Belladonnæ* and ext. *hyosciami*, proved wholly ineffectual. Every thing was instantly vomited up, and the clysters immediately returned. Patient would not submit to an operation. Dr. WAGNER threw up an enema compound of a scruple of belladonna herb, and half an ounce of chamomile flowers in four ounces of water, which arrested the vomiting immediately, and produced such a diminution of pain, that the patient was able to enjoy several hours sleep. The abdominal symptoms, however, returned every six or eight hours, and were four times allayed by the use of the same enema. On the 5th, relieved of the pain and tenderness. Dr. WAGNER was afraid to have recourse to the belladonna, as in addition to great dilatation of the pupils, frightful dreams, sinking and an alteration of pulse, and dryness of the tongue had taken place, and he prevailed on the patient to submit to the operation. This was performed on the sixth, and in fourteen days the patient was perfectly well.

“CASE 4th. July 5th—Dr. WAGNER saw a woman, aged 47, who had labored for two days, under violent pains in the abdomen, obstinate constipation and excessive vomiting. On examination he found an incarcerated hernia of the right side, about the size of a small walnut, which was excessively tender to the touch; diffused abdominal tenderness, and tympanitic distension. Bleeding, leeching, frictions on the abdomen with belladonna and *hyosciamus* were employed without any effect. Patient refusing the operation, Dr. W. had recourse to belladonna clysters, which produced the usual tranquilizing effects; but the hernia remained considerable. Patient exhibited some of the symptoms of the poisoning, as dilatation of pupils, &c. Blood was drawn from the arm, small doses of calomel and laxative salts given internally, and the belladonna clysters continued until six lavements, (each composed of  $\mathfrak{ss}$  belladonna and  $\mathfrak{z}$ iv water) were used. Hernia continuing irreducible, Dr. W. discontinued his visits on the eighth. On the ninth, however, the greater part of the hernial tumor had disappeared, the patient had several copious stools, and in the course of two days found herself quite well.



*Ergot administered in anticipation of Uterine Hemorrhage.*

The Lancet of the 15th of April last, contains some observations from Dr. BRADLEY, on his successful administration of ergot of rye in a case of uterine hemorrhage, immediately succeeding the expulsion of the child, which he concludes by asking whether, when such an event is apprehended, it might not be prevented altogether by giving the ergot immediately before the birth of the child?

In the subsequent No. of the same journal, (April 22nd,) T. ABRAHAM, Esq. bears testimony to the successful administration of the remedy under the circumstances indicated, in six cases, and I. KISCH, Esq. states that he has been accustomed for some time past, to administer the ergot in similar cases, and with the most happy results. So satisfied is this last practitioner of the powers of ergot in preventing uterine hemorrhage, that he invariably enquires, he states, whether the patient has been in the habit of flooding after delivery, and if so, of using the ergot as suggested by Mr. BRADLEY.

The utility of this practice is unquestionable, but if it has any novelty on the other side of the Atlantic, as we suppose it has from the stress laid upon it in the communications just noticed, it certainly possesses no claim to such distinction here. The practice is pointed out by Dr. STEARNS of New-York, in his pamphlet on the ergot, published upwards of fifteen years ago, and as employed many years since by our venerable and esteemed friend, Dr. DEWEES, and is distinctly and strongly recommended by him in his valuable system of midwifery.—

*American Journal.*

We refer the reader to the first volume of the Southern Medical and Surgical Journal, page 68, for our former notice of this article as a mean of controlling and preventing uterine hemorrhage. We should have been more full on this subject, had we not been writing especially with another view, that is, to give our experience with this article in opposition to some opinions published about that time, impeaching the powers, and the safe use of ergot. In addition to what we then stated, we now say that for twenty-five years we have been in the constant practice of using ergot for the suppression of uterine hemorrhage, when

it occurred consequent to delivery in such a degree as to need internal administrations ; and in all instances in which we have had charge of causes on account of the reasonable fear of hemorrhage, or *cases* in which there was any reason to apprehend this unpleasant occurrence. We have diligently adhered to the practice of administering ergot during the labor, even when not demanded on account of deficient parturient action, in order to secure safety from hemorrhage, and with the most satisfactory results, constantly confirming the propriety of the practice. We have used it in two of those cases of dangerous hemorrhage from attachment of the placenta to the os uteri. In one, the patient being twelve miles in the country, was in *articulo mortis*. On our arrival—cold and pulseless, neither the ergot nor any stimulant power could produce reaction, and she expired immediately on the delivery of the child by extracting force, which was done as soon as it was found that she was inexcitable. The other case was attended with happier results. Although the loss of blood had been very great before the administration, yet the system was susceptible of the action of the ergot—the hemorrhage promptly restrained, and the child turned and delivered by the feet. It was a birth at eight months—the woman recovered. Our experience with the article in this relation, justifies the assertion that we have no anti-hemorrhagic power for internal use, combining more uniform efficacy and safety than ergot.

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*Vaccine and Variola existing concurrently.*

The following circumstances detailed to the Editor during the last summer, by Mr. S. B. PARKMAN of Savannah, seemed to afford such conclusive evidence of the fact of the concurrent existence of these two diseases, that the Editor was induced to request of Mr. P. a written statement of the particulars which evince this truth. Mr. PARKMAN's well-known character for veracity, intelligence, and minute and strict accuracy of observation is sufficient to insure the fullest confidence in all the facts detailed. The following is the statement which Mr. P. politely furnished.

“SUMMERSVILLE, AUGUST 3rd, 1837.

DEAR SIR:

The facts of the case I mentioned to you yesterday were, to the best of my recollection, as follows:—

In the summer of 1830, we left with our friends in Savannah, three young servants who had all been vaccinated some years before at the same time. On our return about the first of November, we found the small pox prevailing to a considerable extent, and that our three servants had been again vaccinated. On two of them the vaccine matter produced no effect—but one, a girl about fourteen years old, named Peggy, had a full vaccine pustule on her arm. On the second day after our return, two negroes came to our yard from my sister's plantation on May River, and we had them both inoculated from Peggy's arm, though they had both been formerly vaccinated.

On the third day after our return, Peggy, who had been very sick from the day we returned, broke out with an eruption, which the health officer\* pronounced to be small pox, and she was removed to the public hospital at Cattle Park, where she remained until she recovered.

On her return, I found a number of deep scars from the small pox—I think the number did not exceed twenty—a considerable portion of the pustules having disappeared without filling. Her symptomatic fever, and the progress of the disease, so far as I could learn at the time, were all very similar to the ordinary progress of small pox by inoculation. There seemed to be no doubt in the mind of the health officer but that Peggy had the genuine small pox, although much modified; for the general character of the disease was very severe, many cases confluent, and several deaths.

Of the two negroes who were vaccinated from Peggy's arm,—on one, the matter produced no effect; on the other a full vaccine pustule from which all the negroes on the plantation were vaccinated; and from which nearly all those who had not been previously vaccinated received the genuine vaccine disease. The small pox was on the plantation adjoining my sister's—but none of her negroes took the disease.

I think the vaccine pustule on Peggy's arm was full when the symptomatic fever commenced, and the eruption appeared as soon as the pustule began to dry. I have always believed the girl had the two diseases concurrently.

An infant also had been vaccinated in Augusta, which failed. It was again vaccinated in Savannah on the arrival of the family, which took effect. Peggy was with the family four days before she was sent to the pest house—the small pox pustules *not* mature. The infant had kine pox, and not the small pox.”

\* Dr. HABERSHAM.



This history goes to establish, as far as one set of incidents can,

1st. That kine and small pox existed concurrently in the same individual.

2nd. Small pox was taken in the natural way by Peggy, after kine pox had taken locally, but before the constitutional effects were developed.

3rd. That when taken in this way the vaccine modified the virulence of small pox, &c.

4th. That (as evinced in the case of the infant,) the small pox is not communicable before the maturation of the pustules. These points tend to remove much of the doubt attached to the preventive efficacy of the vaccine disease.

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## MEDICAL INTELLIGENCE.

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We are often pleased by the evidences of the sound practice of our professional brethren throughout the interior of South Carolina and Georgia, and particularly in the latter, as our personal acquaintance is more extensive. Little of the fashionable fancies which float on the superficies of the profession finds its way to the bed-side in retired country practice, and the destructive waves of ultraism, raised and kept up by counter-currents and adverse winds in science, are not fostered by the safe moorings of country life. Here the mischievous ultraism into which he may have run, and the errors of some ephemeral theory he may have been taught, soon succumb to the facts of demonstration; and the controlling power of his only master, *Reason*, governs him henceforth in the even tenor of successful practice. Thus it is, that with a good stock of medical science, he soon comes to that maturity of judgement which renders him a prize of high value to his community.

Previous to the year 1825, that, in which the license law, or medical bill of Georgia was passed, it was a rare thing to meet with a medical practitioner of real science in the interior. It is true that one of great merit was occasionally found in some of the more prominent towns; but by the wholesome operation of this law during a short life of only ten years, quackery was scouted out from the whole country, and true science so pursued, that on the repeal of that law, (which was effectually done by the last Legislature by legalizing at one "fell swoop", a legion of imposters\*) that in no section of the country where there was any considerable

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\* An instance of retrograde legislation perhaps never equalled in the United States.

population, was there a distance of more than a few miles, without a practitioner of true science.

Every experienced and judicious Southern practitioner will see, in the comparison of the following formulæ of scientific practitioners in different sections, the harmonizing and regulating influence of deliberate observation and reason on the southern country practitioners. A pill will be found to have become in general use in certain bilious disorders, in different sections of the country, between which there is no professional communication—no consultation by which these results would be communicated from one to the other. Nor is there much disposition amongst our practitioners to follow the *prescriptions* of one another; but rather to go forward on deductions from their own *facts* of observation, or those facts of others in whose impartial observation they can confide.

We noticed in our last No. the cholegogue pill in use by Dr. DALONY, and formerly by Dr. LUCAS. It is a pill, the good adaptation of which to the general demand of chronic bilious cases, every southern practitioner of much experience, and unbiassed by erratic theories will at once perceive. We now give an extract from a letter from Dr. HOLLOWAY of Warrenton, as follows, on the treatment of intermittents:—

"R. Comp. ext. colocynth.	gr. xxxvi
Calomel	
Pulv. gum gaurboug. aa.	gr. xvij
Ipecac.	gr. vj
Anise oil	gtt ij
Spanish soap	gt. xxiv

Syrup q. s. Make twelve pills—dose two or three at night; or one every night as occasion may require.

R. Precipitated ext. of bark  
Piperine  
Sulph. quinine, of each equal parts.

Make a mass, of which a pill of three grains is to be given every two hours. If the ague should return add one quarter of a grain sulph. of copper to each pill."

With this course of cholegogue and tonic treatment, Dr. H. informs us that he rarely fails to cure the most obstinate intermittents; and that they are "particularly beneficial on chronic, habitual cases." The formula for cholegogue pills, he has used for the last twelve years with great success. It is not a little remarkable that we find the cholegogue pill of both these gentlemen almost identical, not only in the ingredients, but the quantity to the dose.

Dr. HULL of Athens has for many years, when in full practice depended for his cholegogue, mainly on a pill almost identical with these, and with the most satisfactory success. The following is his formula:—

R. Ext. of colocynth  
Calomel aa 3j  
Tart. antim. one eighth to one quarter gr.

Mix and make twenty four pills. Dose three to four pills.

From another source we have received another formula for a cholegogue pill, differing from this last only in the tartrate of antimony being three grains, instead of one eighth to one quarter, and the dose two to four pills.

# SOUTHERN MEDICAL AND SURGICAL JOURNAL.

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## PART I. ORIGINAL COMMUNICATIONS.

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### ARTICLE I.

*A paper on diseases mistaken for Hernia, with cases. Reported for the "Southern Medical and Surgical Journal". By HEBER CHASE, M. D. of Philadelphia, Member of the Academy of Natural Sciences—of the Franklin Institute of the State of Pennsylvania, for the promotion of the Mechanic Arts—Honorary Member of the Philadelphia Medical Society, &c. &c.*

Among those diseases most frequently met with and often mistaken for hernia, are *varicocele*, or a varicose state of the veins of the cord. *Buboes*, or glandular swellings in the groin from any cause. *Hydrocele*, or dropsy of the tunica vaginalis. *Hydrocele of the Cord*. *Enlargement of the Cord* from any cause, and *Fatty Tumours*.

*Variocoele or Cirsocoele*. Within the last three years I have been consulted in several hundred cases of hernia,\* and by

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\* A tabular statement of two hundred cases of hernia will shortly be laid before the profession.



many patients, who, upon examination, were laboring under varicocele, and frequently wearing trusses applied by truss-makers and druggists. Patients of this description are constantly falling under my observation. It has heretofore been almost universally the custom for practitioners to send their patients to instrument-makers for trusses, and it is by no means uncommon to hear some of those gentlemen boast of the number of trusses *they* have "put on." Should they be able to distinguish an enlarged vein, a firm tumour, or a bag of water, from a bowel, the knowledge appears of little moment to them, provided they effect their object, *the sale of a truss*, even at the risk of the health and life of the patient.\*

It is not unusual for surgical writers to censure the profession for mistaking variocoele for hernia ; and there can be no doubt that such mistakes do sometimes happen ; but it may safely be said that in those cases where trusses are thus improperly employed, there is seldom ground for believing that they were applied by those whose extent of surgical knowledge and acumen have equalled their desire for such acquirements.

#### *Glandular Swelling in the Groin.*

*Tumour in the Groin mistaken for Hernia—age of patient, 6 years—application of poultice to the part ; discharge of contents—cured.*

CASE 1st. April 24th, 1837.—A lady called at my office accompanied by her little son, aged six years, whom I had cured of an inguinal hernia of the right side. She informed me that she thought "the disease had returned." Upon examination I found a tumour about the size of a hen's egg located near the seat of the internal ring, but a little outward and upward therefrom ; and upon further examination, I was convinced that it was not a return of the bowel. The mother fearing there might still be something wrong in the case, I requested Dr. R. COATES to see the patient, who coincided with me in opinion. I ordered the parts to be poulticed. In five days the abscess opened spontaneously : the contents were discharged, leaving a smooth cav-

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\* TRUSS. This is an instrument employed by Surgeons.—*Surg. Dic. article Truss.*

ity, the edges of which were drawn together by adhesive strips, and in ten days the patient was well.

Not unfrequently, fatty tumours are found to occupy the seat of crural herniæ, which should not be mistaken for this disease.

*Femoral Hernia mistaken for an inguinal gland—age of patient about 45 years—operation for Strangulated Hernia—death of the Patient.*

CASE 2nd.—A few months ago I was requested to visit a public institution near this city, to apply a truss in a case of hernia. On examination, I found the patient laboring under irreducible femoral hernia. The tumour was of the size of a filbert, and could not be returned into the abdomen. The surgeon and attending physician of the house thought the existing tumour to be a lymphatic gland; that the bowel had been returned, and wished the instrument to be applied. Satisfied that such was not the case, I refused to comply with their request.\*

On the third day following, the symptoms of strangulation came on. An operation was performed for his relief, but the patient died a few hours after.†

*Hydrocele, or Dropsy of the Tunica Vaginalis.*

CASE 3rd. In the early part of the year 1837, I was called to visit the son of a clergyman of this city, who was supposed to be laboring under double inguinal hernia. He was wearing a single truss. On examination, I found that whatever might have been his former condition, he had at this time no protru-

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\* I employed *taxis* to considerable extent in endeavoring to reduce the bowel in this case; but had no opportunity for instituting other means. I could not learn how long the bowel had been protruded.

See an interesting, and instructive case of strangulated hernia with the employment of *taxis*; successfully treated by Drs. P. F. EVE and DUGAS of Georgia, with remarks by PAUL F. EVE, M. D. in the September No. of this Journal for 1837.

† This species of hernia is liable to strangulation, even before it can be felt externally. Hence it is obvious that we must establish our diagnosis principally on the preceding and concomitant symptoms of the case. Some fatal effects have resulted from mistaking strangulated crural hernia for inflammation of some of those lymphatic glands which lie in the vicinity of the crural ring. The deep situation of the hernia, together with its very small size, have contributed to render the mistake more frequent. In some instances the difficulty of discriminating is considerably increased by an enlarged lymphatic gland lying anterior to a very small hernia.—*Colles' Surgical Anatomy.*

sion of the bowel ; but he was laboring under hydrocele on both sides, which, by a superficial observer, might be mistaken for ruptures.

This watery effusion could be readily returned into the abdomen, showing that the necks of the sacs were not closed. Upon further examination, I found a general dropsy of the system, and that the patient had labored, not long before, under an attack of scarlatina, the dropsy being one of the sequelæ of this disease. I requested that the family physician might be called in attendance, which was done. The patient died, however, of hydrothorax, in a few days.

### *Hydrocele of the Cord.*

CASE 4th.—On the 11th of August, 1837, a gentleman and his wife, from the interior of this state, called on me (by the advice of their physician,) with their little son aged three years, to consult me in relation to an inguinal rupture, to which it was supposed their child had become recently subject.

After a careful examination, I found the disease to be *dropsy of the cord*. The fluid could not be returned within the ring ; but the tumour presented at all times the appearance of a hernia. Under appropriate mild treatment, the affection disappeared in about a week. As the physician whose patient the child had been, thought there was at times a protrusion of the bowel, I furnished the parents with an instrument to be employed in case the bowel *made its appearance, but under no other circumstances*. The parents returned home with the child, and I have heard nothing further of the case. Dr. WARREN of New-Orleans, has met with two similar cases.\*

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\* From the connexion which inguinal hernia has with the spermatic cord, you must expect that those diseases to which the cord is subject, will bear a resemblance more or less strong, to this form of hernia. Thus, when water collects in a cyst on that part of the spermatic cord which lies in the inguinal canal, forming encysted hydrocele of the chord, the appearance and feel of the parts will not be such as to constitute a satisfactory distinction between these diseases. We must then depend a good deal upon the history of their origin and growth, and also upon their attendant symptoms.—Colles' *Surgical Anatomy*.

A sac of fluid formed upon the cord, or the cellular hydrocele of the cord, may be mistaken for this kind of hernia. If large, the tumour may be known from its transparency, its uniformity, and elasticity; it does not receive the impulse from coughing, as the hernia does.—Sir CHARLES BELL.



*Enlargement of the Cord.*

CASE 5th. August 10th, 1837.—I was requested to see Master —, aged five years, who had an inguinal hernia, which had passed only into the upper portion of the inguinal canal. This was easily reduced, leaving a tumour which resembled a bowel, and, on examination, was found to be attached to the whole length of the cord between the external ring and the testicle. Strong efforts were made to detach the tumours, but without effect. The hernia being reduced, I applied the Inguinal truss, which perfectly retained the bowel, the tumour remaining in the same situation.

12th.—I requested Dr. R. COATES to see this patient. On examination his opinion corroborated my own. We judged the tumour to result from a deposition within the substance of the cord.

13th.—The patient wears his truss without any inconvenience.

17th.—Since the application of the truss there appears to be an evident diminution of this tumour.

Sept. 15th.—On a careful examination of this case to-day, no appreciable difference could be observed between the two cords by the eye; and a very slight thickening could be felt between the testicle and abdominal ring.

*Ventro-inguinal Hernia, which had passed into the scrotum; occurred while fox-hunting—mistaken for Hydrocele—patient objected to the operation for Hydrocele.*

CASE 6th. January, 1836.—H. S—, an English gentleman now resident in Philadelphia, has been subject to ventro-inguinal hernia of the left side for ten years. This accident occurred in fox-hunting.

This patient consulted Dr. HARTSHORNE, who referred him to me. The hernia was easily reduced, and was perfectly retained by the ventro-inguinal truss. He had never worn any instrument previous to this application. *The tumour always retired at night, and reappeared during the day.* About five years ago he consulted a Danish naval surgeon, then on the

West India station, and the case was pronounced hydrocele. Two different hours were appointed on different days, for the operation of tapping and stimulating injections; but fortunately the fears of the patient in both instances prevented the execution of the design! No attempt at reduction had been made by the surgeon, as there was not even a suspicion of hernia in the case; and the diagnosis was thought to be so perfectly plain that great offence was taken at the unwillingness of the patient to submit to advice! The reading of a medical work at length convinced the gentleman that he labored under hernia, which induced him to apply to Dr. HARTSHORNE.

*Varicocele mistaken for Hernia—case of four years' standing—application of Dr. HULL'S Truss—afterward of Mr. STAGNER'S instrument.*

CASE 7th.—A—— Y——, Esq., a gentleman of high standing, from one of the southern states, came to Philadelphia for the purpose of consulting me relative to a supposed "scrotal hernia," with which he had been induced to believe himself affected.

About five years ago he consulted a gentleman, not of the profession, who acted for the sale of a celebrated truss invented in New-York; who, under the belief that the case was one of genuine hernia, applied the truss. The patient continued to wear it for some time; but finding the disease greatly aggravated under its use, he at length relinquished it.

His disease still continuing, he applied for relief to a gentleman in Washington, D. C., who furnished him with Mr. STAGNER'S truss. This instrument he continued to wear for several months, until the distress resulting from the complaint became altogether insupportable.

On examining the patient, I found that he labored under an unusually extensive enlargement of the veins of the spermatic cord! He had cirsocele, and there were no signs whatever that hernia had existed in the case at any time!

This information being communicated to the patient, his joy and gratitude were as great as could well be imagined under such circumstances; for he had been harrassed and annoyed

for years with even an exaggerated dread of strangulated hernia and the knife !\*

*Inflamed Inguinal Gland mistaken for Hernia—age of patient about 30 years—injury from the improper use of a Truss—Fistulæ—cure.*

CASE 8th. March 25th, 1837.—I was requested to see Mr. —, from Virginia, a gentleman of a corpulent habit, good constitution, and who had heretofore enjoyed general good health. This gentleman's attention was first called to a tumour in the right groin, near the seat of the internal ring, about two years ago, when he consulted a physician, who applied one of Dr. HULL'S trusses. This instrument gave him no material inconvenience. He wore it about two months, when, the tumour not disappearing, he threw it aside. Shortly after, he applied a second instrument, with a stronger spring, but with no better success.

Soon after the trial of the last named truss, he met with the instrument called SEMPLE'S truss, (the late Dr. HULL'S spring, with PRICE'S leaden conoidal block.) This truss is now in my possession; he wore it for a few days with the leaden conoid placed directly on the site of the internal ring, but was confined to his bed by the pain produced by that instrument. His tumour not disappearing, and his groin having received great injury from the pressure, he threw aside all trusses.

I found him able to walk about, but with his right inguinal region very much swollen, of a bluish color, with two small suppurating orifices on a line with Poupart's ligament, and near the site of the internal ring. I ordered a large poultice to the groin, and left him in the recumbent position.

26th.—On the removal of the poultice to-day, two more orifices were observed: one, above those before mentioned, and about an inch nearer the anterior superior spinous process of the ilium: the other was situated a few lines nearer the os pubis than those first spoken of.

A communication could be traced between the first three mentioned, by which they were united from twelve to eighteen lines below the surface.

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\*I have more than once known a truss applied for this disease, (varicocele,) and in one instance, to the son of a medical man, by his father.—Cooper's Lectures.



The upper one communicated with still another orifice further to the right, and at the outer side of the thigh : while the lower one penetrated almost to the angle of the pubic bone.

27th.—Dr. R. COATES was called in consultation. Poultices were removed, but re-applied.

28th.—Poultices removed ; matter of a greenish color escaped on pressure. Ordered injections of sulphate of copper grs. xxx. to the ounce of water ; enjoined rest in the recumbent position.

30th.—The poultice re-applied.

April 1st.—Professor GIBSON met us in consultation this day. On the removal of the poultice, a fifth abscess was discovered situated a little below that last mentioned, extending down the thigh the distance of four inches. Injections were also thrown into this extensive opening.

It was suggested that a seaton should be introduced from the upper orifice to that next adjoining, and that the remaining fistulous communications should be treated by the injection of sulphate of copper, reduced one half in strength.

2nd.—Professor HORNER met me in consultation this day. I now applied graduated pressure over the abscesses indiscriminately by means of cloth of elastic webbing and compresses ; attention was also paid to his diet, which was ordered to be mild and nutritious. Two grains of blue pill were directed to be taken every night, and mild laxative medicines when required.

Cold applications to the parts were also occasionally employed where the heat of the parts was increased.

12th.—Upon examination it was found that the abscesses were closing at the bottom ; treatment continued.

15th.—No material change having taken place where the seaton was employed, it was removed, and the injection of sulphate of copper substituted.

20th.—No material change.

25th.—The abscess where the seaton was employed, is now uniting under the use of the copper.

29th.—The part of the abscess extending towards the os pubis is now perfectly closed.

May 9th.—The abscess which passed down the thigh is completely healed ; the other fistulæ admitting a probe to the depth of two or three lines only.

18th.—Fistulæ entirely closed ; patient permitted to rise and walk about the room.

20th.—Patient rode out for the first time.

25th.—Compresses removed.

30th.—Mr. ——— left the city for Virginia.

We saw no indication that hernia had ever existed in this case.

*Varicocele mistaken for Hernia, after cure of hernia—age of patient 28 years—test of cure, two and a half years discontinuance of the instrument.*

CASE 9th.—Common inguinal hernia of the right side. Mr. ———, a gentleman aged 28 years, accustomed to much exercise. Accident of more than two years standing. The patient had never worn a truss before he placed himself under my care.

In January 1835, my common inguinal truss was first applied. I saw the patient frequently for the two first months ; after which he regulated the instrument for himself. He continued the use of the truss for two months longer, and then relinquished it without my advice.

June 10th.—I saw the patient again. There had been no protrusion in the interval, but he complained of slight pain and a sensation of weakness in the part, when he rode on horseback, or was driven rapidly over the pavement in a carriage.

May 20th, 1836. The patient came to me stating that he believed there was a relapse of the disease, and that the bowel was in the scrotum. I examined the parts very carefully, and found the cure complete. The rings were perfect, but he had labored under a slight cirsocele on the right side, which had been considerably aggravated by active exercise and the heat of the weather.

July 20th.—The patient continues well of the hernia, and the cirsocele has been diminished under the usual treatment. He has never been examined by any other surgeon, having steadily refused to submit to such an exposure.

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\* See on the 247 page of this volume, first paragraph, a case of abscess with hernia. The abscess was opened by M. LISFRANC before the hernial protrusion was detected.  
EDITOR.

## ARTICLE II.

*Observations on the actual state of our Medical Epoch.* By  
JOHN B. GORMAN, M. D., of Talbotton, Ga.

Error is natural and easy; but truth, hard and difficult. The former seems to move by the impetus which originates in itself; while the latter passes from age to age with a heavy, dragging, motion; its tendency is to be stationary, and its transport through time, accomplished only by the hard toil, the combined efforts of the real thinkers of our species. Error moves through time noisy as down an inclined plane, generating its own velocity; truth is pushed steep-upward, and disputes with obstinacy every inch of ground it is compelled to traverse. Its real friends in all times have been few, its false patrons, all our race: and its travelling place, far out of sight in the rear of error.

In Egypt, Phænesia, and Greece, the infant sciences wept over this unequal struggle between the two. To turn the scale of victory on the right side, they built temples to truth, called Hermes in bodily shape from Heaven, invoked Appollo and brought Minerva out of Jupiter's brain. But these temples are in dust, the tomb of Jupiter is in Thrace, Hermes is forgotten, and our sciences, in their old age, still mourn this unequal struggle against them.

In no department of knowledge has this state of things been so deeply felt in all times, as in medicine. Religion has its teachings from the sky to guide and govern; its fundamental principles, the ideas of another world. On a few infallible, self-evident propositions, mathematics has reared the edifice of her stupendous science. For the other sciences, we may say, the five senses labor with facility, and furnish materials. But for medicine, in many respects, their operations are embarrassed; much that is essential lies beyond them; they yield not their full product, and the mind arriving at the ultimate boundary of their lights, reaches the truth now lying before it, by a route of thick and perplexing darkness. But how deplorably often it has failed, the history of our science, but too plainly shows. Its essential ideas are scattered throughout the universe. Vast time



more than has yet transpired is necessary to collect them; and, in the future history of our race, medicine must be the last to arrive at perfection. And we should think, if death be the greatest misfortune, and life and health the greatest blessings, all wise legislators ought to stimulate to its cultivation, supply the means; and, on our part, however difficult, the neglect of its profound study ought to be esteemed profanity and blasphemy offered to human nature. This has been attempted in many of the older states of Europe. Medicine under the patronage of government there, for the last twenty years, has far outstripped all its flights in former times: and, in the actual epoch, never before have arisen so many illustrious professors in every department, nor the world deluged with an equal number of false pretenders. Let us discuss a little this matter. The happy influence the modern sciences have exerted upon the arts in abridging labor, and arriving at the desired results by short and inexpensive routes, has contributed to it. The principal operation of this influence is upon vulgar, popular opinion, inducing the belief, that, since what was formerly accomplished by vast time, labor and expense, is now effected almost without any trouble at all; and, that since the world has become generally enlightened, all this mighty study about medicine, if not an imposition upon the good sense of mankind, is, at most, but little better than useless, idle stuff. Thus upon the perturbed face of modern society, has been erected a vast emporium for empiricism, whose turrets outtop all the former world. Misled by their ignorance, judging wrongly what they do not understand, the people have opened a market for doctors of their own taste and stamp, and patronized a *medicine they can understand*;—a medicine, which to nature, falls short even of the *merit* of a *real* mockery. Naturally enough physicians of this easy and spontaneous elaboration, incubated by the mere warmth of popular breath have multiplied, of every shape and form, pleasing in the people's eyes, and crowded full up to the public demand.\*

In our own country, and otherwise happy epoch, men from all ranks and conditions of life, are clamorous to practice the divine art of healing; and, what few restraining laws existed

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\* A most faithful description of the Thomsonian cohorts.

among us are blown away before the popular breath. To the eager enterprizers of this art, the gates are thrown wide open, and liberty reigns again.\*

When the laws banished all the physicians from Rome,† their art was entrusted to the hands of the Priests of Apollo. These Priests possessed the learning of their time, which places our medical nineteenth century behind the shadow of Rome, for our *unlettered have become our Priests*.

But the most deplorable feature in this state of things is, among those who would regularly cultivate the profession, slight and superficial attainments are encouraged. For, if the people, among whom our art is to be practised, believe that laborious study, profound research, have but little or no influence upon its success, the most powerful stimuli to support the student's painful toil—the hope of fame and reward are removed. And this must ever be the case, since nature forms but few to be delighted only with the pleasure which study and meditation impart. The impulse, therefore, among the vast majority who study medicine, must ever supply the place of the inborn love of study. And if the people believe that all learning is a *humbug*, and calculated only to give the profession an imposing air and aspect, and are willing, nay, prefer to patronize and support the illiterate, the short and the bye-ways to practice, must be the most frequented. Those who travel the route of study, will be the few, the scanty few, whom nature brings forth sparingly, and scatters through ages to think and speak of her, to whom she unbosoms herself, and whose thoughts she wings with fire to beat up, and grasps at the feet of her Creator. They are born in a sea of thought, and live only to think. On these hang all the hopes of medicine, and the other sciences.

It cannot be denied, in many parts of our country, the opinion prevails, that much study in medicine is useless: it is an

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\* See *Oeuvres complètes de Cabanis*, tome I. et *Histoire de la Médecine* par Sprengel, for a full account of this affair and the results of it.

† In some of the states of the German empire, in France, the laws are very binding on the physician. If the patient suspects he has not been treated correctly according to the regular rules of the art, and he has sustained injury thereby, he may sue his doctor and recover imprisonment and heavy damages. How different the government of Georgia and our country.

art which requires but little thought or preparation ; nay, that learning mystifies the mind, makes a fool of its possessor, and disqualifies him for practice. Were such opinions and views entertained and cherished only by the weak and the vulgar, it would not be so deplorable. They infect and lay hold on strong natural minds, nay, many of the highest cultivation ;\* and have for their prosperity and support the sanctions of information, strong, good, common sense, respectability and high standing in society. And there are not wanting those, a busy, restless, artful band, who with all their strength and ingenuity, dress up these opinions with pleasing, winning contours, teach the unsuspecting and strive for universal proselytism ; making of the world a vast work-shop, where their fortunes are to be manufactured.

“ Flap on the skirt of night your raven wings,  
Ye black, ye fetid, hungry death’s I’ll feed,  
With entrails of a thousand living men,  
Your crops, if I but two pence gain.”

It is easy to believe what we desire ; if we could arrive at the possession of goods and fortune without labor, it is the way we would prefer. The subject before us is in the same predicament. Thousands would make a livelihood of medicine, did they possess the knowledge. In the distance, we may say, they behold its vastness, and the mighty acquisitions which it has recently gained. They are deficient in its auxiliary sciences, may not possess courage or abilities for its prosecution ; its boundaries appear frightful ; the space to be travelled over, great ; it is a world which must ever be concealed from them and their enjoyment. They despise what nature, by placing beyond, has refused to their acceptance. Without sagacity or qualification to understand, they proscribe ; without reason, they condemn reasoning ; without knowledge and experience, they condemn the knowledge and experience of all ages. All libraries, all colleges, institutions—all the most august and venerable labors and monuments of our species are insignificant rubbish. “ *Et simulacra ‘magnæ,’ temporum percussa, et statuæ veterum hominum dejectæ sunt.*”

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\* In a conversation the writer once had with a professor of our University, he declared his belief that Quack Doctors frequently cured where the regular art failed ; and had placed his sick under a root monger, who professed to salivate with roots. Every one knows I. I. ROSSEAU has noised his contempt through all ages.



They affect to despise all wisdom, all teaching—every thing of the kind which existed before *they* began to think ; or rather a growth of mind without thought. But all this would avail nothing, if the people who are to pay them for their services have no faith. The next labor is to make the people, who trouble themselves with but little thinking, except in their own line. They apostleize ;—every newspaper is their minister. They tell of their Arabian knight cures. If you doubt, they strike, and the rest cry out, “lay on Macbeth,” shoot their porcupine quills, and make common cause. They are fond of trying their new-born skill on the old incurables—those mountain rocks that did not fall when the storms of other times were passing ; which now, with a tremendous crush, are pretended to be swept away.

“ Ruat coelum,—terra de his cat.”

But is the world so weak, silly, credulous ? In religion, morals, the science and art of government, the social, domestic and industrious arts, in civilization, argention, or money-making, the public mind has attained to a knowledge unknown to all former times. But in medicine, as in astronomy and some others, the superstitious bigotry and the midnight darkness of the worst, of the most barbarous ages, tyrannise over it, and hold it in fetters. It has made no advancement, never can : the general interests of mind will never be attended to on our planet. The views of BARTHEZ,\* GOODWIN,† HELVETIUS,‡ of the advocates of *human perfectibility*, are but lonely dreams. The elegant arts, *argention*—whatever administers to the organic wants, and the passions, will still advance. The causes are forbid in our discussion. Scientific, popular medicine is among those which must remain nearly stationary for all ages. It is true the *unlettered*, the *uninitiated* man might calculate an eclipse, but would be sure of detection ; while the same might prescribe a dose of medicine without detection ; nay, with success and applause. Not that he has more knowledge and skill of the one than the other, for this he is supposed not to have ; but because different

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\* Nouveaux élémens de la science de l'homme.

† Political Justice.

‡ Traité de l'homme.

laws govern in the two things. All the *aethereo-dynamical* movements arise from the operations of one great law or inexhaustible, changeless force, of whose modes of action he being ignorant, might calculate forever without hitting an eclipse. While in the dynamical system of living organology, where all nature conspires to modify not only the actions, but likewise the sources whence they arise, he might *chance* prescribe—that is, offer a *modifier*, which affecting some of the systems, *might superinduce* a new order of living movements, and tend to *sanification*. And were the laws which govern the two systems, the same, both straight onward, every sickness would be death; and nothing but *sheer* skill, as in the eclipse, could save the patient. Here, then, is the great fountain head of all empiricism, medical, *irredeemable, popular ignorance*. Here is what has cloaked the false pretenders of the art for all ages past from detection, and screened them from merited anathema and detestation; nay, in place, has enabled them to receive the good will and benedictions of those their wicked ignorance and audacity were stabbing to the heart. And, salarous *illuctabile scriptu!* here will be forged chains strong enough to hold all our future race—a despotism where, unlike as in others, no rebellion will ever come to fling off the yoke. For mankind can never be enlightened generally on their health, disease and treatment. Our sublunary condition forbids it; these are topics of vast import, and demand great time and study to give but a moderate knowledge. The endless ramifications or departments of life—*argmentation* with its thousand active streams must go on, must occupy the time, the thoughts, and industry of ninety-nine hundredths of our race, leaving no room for their study. These, therefore, and more who possess not the ability, must ever be at the mercy of the few who make, or pretend to make, a business of the art.

There is no hope that knowledge can ever become so general, that mankind in mass may judge correctly of the skill and abilities of medical practitioners, and detect the dupery and falsehood practised upon them. And the more so, since it is undoubtedly true, the torches, which the other sciences hold up of themselves, although so essential, fling but a dim light on medicine. To be understood it must be studied with them, and

by their lights. Ignorance, bigotry, medical superstition and credulity will continue to be associated, and the tales of marvelous medicines and cures, unknown to truth and to nature, will continue to be listened to, and read with interest and approbation. A reform, therefore, from the general diffusion of knowledge, can never be looked for; and as it always has been. Empiricism must exist onward, a most disastrous evil and monument of our common frailty. In proof:—While most of the other sciences have advanced, and a deeper and wider interest been felt for them, popular medicine has remained nearly stationary; in despite still, in the winter of barbarous times, standing alone in the solitary horizon, whence all other knowledge has emigrated. There it stands, in the forlornness of a dilapidated world, while among its cultivators, at the very moment we are recording this memoir of the actual epoch, it is shedding the most brilliant glories, that any part of its history has ever manifested. But this light falls only on the profession, in the people it meets a permanent barrier. And, at this period, even of its professional prosperity and brilliancy, public esteem and admiration for it seems rather to have retrograded than advanced. For, we know the Ancients created it into a Divinity, associated it with the worship of their Olympic gods,\* paid their homage to its most illustrious professors, and, to their memories after death, erected statues. But for its gift we wise moderns thank not God nor Providence, believe it the growth of our own minds—may flourish by the side of stupidity—that wisdom comes not from thinking and thought's materials, and conclude

“Darkness enough to cover thrice  
This double hemisphered world.”

“*Aevum miserabile!*” in which the majesty of reason and truth can never hush the noise of quackery. Public incurable ignorance, we see, is the vital air it breathes, in which it is engendered and kept alive as infusory life. Of *reptile vitality* and prolific in the extreme, it deposits its germ in the shady places of men's minds, where it grows up to consume the orphan's substance, it has made an orphan. Its footsteps are seen

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\* Diodorus Siculus, Opera. Cudworth's Intellectual system.



about fresh graves; in its intercourse affected by modest, cautious and circumspect; and its voice is heard consoling amid the *death screams* of the unsuspecting, dying—a vampire that clings fast to the revolving orb of generations, marking the whole *clean* web of time as it is unrolled with its filthy trail. It does not walk in the back-ways, in the bye-paths, in the shadow of night;—it does not ply its busy industry in the mean hovel, on the dirty, honest peasant, stretched on his sick bed. Charity freezes its efforts. It flies from poverty as from sin, except it can use it to deceive and make its trade. It loves to decorate itself and walk in meridian light, conscious that its hideous form is concealed. It is fond of splendor and show and noise; loves high places, and the houses of the great and the rich. In its manners so affable, so accommodating, so subduing; it finds easy access, flatters vanity, and lulls suspicion. It is so artful, none but the medical learned are free from its attacks. Upon minds possessing all other sorts of science, it fastens as a deadly superstition; and reigns and tyrannises almost over the universal mind of our species, furnishing extra width and depth to the common natural grave.—*Power Incubus—Upas-born! irradicable!!* General scientific knowledge opposes to it but a feeble barrier, as experience shows; its only efficient obstacle is the learning and teaching of real medicine, which, as before, must ever be limited to the few. And the pressing occupations, wants of life, natural inabilities again, must always restrain within certain limitations this diffusion of general information to contract or expand a little with the accidents of ages and governments. Therefore, we repeat, quackery is an *enduring, irradicable evil*, flourishing in our age, hoarding up its millions which is its genius and instinct.

“Le charlatan, au contraire, a besoin de hors qui frappent le peuple et qui préviennent l’examen. Il,” again says M. BIOT, “y vante au contraire,” meaning to the true physician; “haute-ment, il y fait vanter ses pretendues découvertes: il en parle continuellement avec assurance;” and then the delusion is sustained.

The lesson this fact should teach, the influence it should exert, ought to arouse honorable ambition, stir up to more vigorous effort those in the profession and those taking it on, that

they may raise higher the standard and character of its excellence. And although they must often honestly admit its *insufficiency*, and cannot promise to cure *always*, yet, with all the perfection of which it is susceptible by effort, endeavor to render it worthy and acceptable to the world. Excepting by government, in this way only can effectually be ameliorated the horrors of the empiric's art. While our people have erected a tribunal for even the most trifling crimes, even for insulting or speaking evil of a healthy man : yet by *abusing, maltreating and killing* a *sick* one, no legal offence is committed, and, as in Europe, no tribunal erected. It is then a most heinous crime to become *sick* : and does a man by so doing *forfeit* the *protection*, the *right* of law ? These are great questions, and much time must pass, being too much in infancy, before they will meet with a correct solution among our people. But in evolving light, the day must come, when future legislators will erect in our country, an altar of justice, before which, the *wrongs* and *abuses* done to the sick and the dying, will be redressed.

"O secula! currite, currite  
'Nobis' regna referte 'medicinarum'  
Saturnia.!"

To this great end, and to suppress the evils of empiricisms, we are called upon by every principle of honor, by all the virtues, by patriotism, by philanthropy, to make the effort. Quackery is the war of falsehood against truth, of dishonesty against honesty, of deceit and hypocrisy against sincerity ; of audacious ignorance and stupidity, against truth and intelligence ; of wickedness against uprightness ; of inexperience against experience ; of foolishness against wisdom. On the one side stand arrayed all the *vices* and the *great unconscious world* ; on the other, the virtues and *wisdom, born of time and experience weeping*. Unhallowed warfare !

Remark it, empiricism is not one ; it has its modifications to accommodate the assailable points of our nature ; has a color for every eye, excites curiosity, originates novelty to please. It imports the name of its medicinal agents from afar. They come perfumed with oriental sweetness—cure prodigiously ! The same remedy searches every avenue of the economy ; disease is its game, and attacks any it may chance to perceive or meet. A thing not at all incredible !

It issues its proclamation. "Nature offers a vegetable remedy for every disease;" and the Grecian mother and mistress of flowers is profaned to give the report dignity and acceptance. It is believed. But how was it ascertained that nature has deposited all the proper curing agencies in plants. Who knows whether the eleven millions of species on the globe will cure "all flesh is heir to?" Why as well not believe she has entrusted these *sacred* powers to minerals *exclusively*? All dead men are mineral substance. Why can she not medicate with such? Because they are all poison; and are plants not poison *par excellence*? But do not the Japanese, the Kiagou, and many of the Asiatic tribes feed largely on mineral food? and are they all dead? Has not experience ascertained and reason approved it, that every agent in nature, may act medicinally? But reason and experience are proscribed, for they would tear off this incubus which sticks, hanging to the Jugulars of nations. The reason is obvious. The regular practitioners use remedies derived from all the kingdoms of nature. This fact is generally known. These remedies, therefore, must be condemned—will not answer the purpose. They are devoid of the charm of novelty; public opinion must be intrigued on this point: triggered up to suit the sale and employment of the article and its makers.

"If to her children, the mute earth could speak,  
Through their crammed ears no sound would reach."

But what is a greater calamity, we have said, that among the practitioners *called regular*, slight study and superficial acquirements, encouraged by the ignorance of the people, are the order of the day, constituting a species of quackery more full and destructive than the former. This may be considered in the light of a domestic enemy, the other a foreign foe. The one is supposed and trusted as going forth with all the panoply of the art, *being regular*; therefore more universal and mortific. The other labors under suspicion, and its mischief is trammelled. Our science, great in the transatlantic schools, among us has dwindled down to the *little blind art* of a few simple manual operations—that of knowing how to purge, bleed, blister, and above all, how to salivate a sick man in a fever. Many of our practitioners—far too many, popular too, without the ability to



write their prescriptions grammatically, seem to aspire no farther, than to be able to do this *bit* of *druggery*, as some machine, and possess only an ambition to do and receive, and not to know. They learn to pronounce a few hard names to distinguish them from other men, talk a word or two about *mortification* to explain *consolingly* inevitable death, and support their name for skill. They cannot read to grow wise, for they feel every proposition is an overmatch for their qualifications, and reading growing disgusting, is abandoned. With these, physic is a mere trade, and is followed only because it is the easiest sort of work in proportion to the gains.

Unfortunately for the interests of humanity, those who study and learn to bleed, blister, and salivate—this oligarchy of medicine—of all who make a business of the art, are far the most numerous class. Their services are in demand: for egotism causes men every where, to place a high value on their own opinions and judgments; and their medical ideas and views correspond exactly enough with those entertained by men generally, to be approved; and if there be outside crust enough to conceal the interior make of these mock doctors, patronage will be extended. Their services are always at hand, because of their cheap and easy manufacture and elaboration. A few days absence from any other trade less profitable, puts the aspirant in possession of all the craft, and there is a new doctor.

“Tridente, sic, pulsat Neptunus.”

So with his mighty trident Neptune struck  
The gellid earth, and from its bosom cleft,  
Sprung up the war-horse,—down Numidia's plains  
Thundered along.

But do you assert what is credible, and allow common sense to mankind? Exactly so. “*Practice makes perfect* ;” and *experience* is esteemed every thing in medicine. Here is the spell, the fatal delusion and *throat* of death unwittingly procured. These venerable axioms so true in every thing besides, but in physic, as the good ZIMMERMAN\* long since remarked, exactly false. There is such a thing as “having ears, and hear not,” “eyes, and see not.” The eyes and ears of our science are the offspring of study and profound learning. Without

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\* Treatise on Dysentery. See Jackson Prof. Inaugural Address, 1834.

them, experience is a dead power and can avail nothing. I assert it, from the *nature* of things, there can be no *experience* without theory. Behold him—the illiterate, unsanctified presence and audience of nature, gazes on his patient, as she unfolds to him the mysteries of the morbid operations she is carrying on; points out to him her remedies, beckons to him to look at her struggles. He listens, but hears not her consoling voice; he looks, but sees nothing tangible; or if he sees, he knows not what. He is a blind man; his mind is not informed, he cannot know and read the language of disease and nature. He is incapable of experience, can never grow wiser by practice, must end about where he began his career, in utter darkness. For there can be no experience without theory, nor theory without learning. But the world supposes he has gained experience and skill; thrice fatal delusion which fattens the sepulchre, but makes money and fame for the doctor.

Again: Has the illiterate lover of star-light, who may have gazed on the heavens until he is old—before whose eyes the same nature has been continually presenting the secrets, fair and fully, of her celestial motions, gained any thing; and who has witnessed a thousand times all the most skilful astronomer ever saw? Can he tread the zodiac round, walk with the stars, converse with them? Does he know, tell me, the great cycles of time, the parallaxes, the relative weights, distances and magnitudes of the sun's wandering train, their parabolic movements; Luna's loop-formed orbit; where Aquarius holds his court, where the head of Andromeda rests; where wanders Orian holding the lion's head, and the horn of Monoceros? Has he gained experience from what he has seen? Can he foreknow what he will see? He has been present, but unconcerned. He has eyes, and has seen nothing; his mind has not been fecundated; he has no theory, therefore, can have no experience. He does not understand the Divine language in which Urania records her history, that is, without theory. Therefore, he knows nothing, has been an *idle spectator*, and is where he began—in *utter darkness!*

I remark:—Nature makes only impressions on the senses; her doings, her ways, and her truth she reveals only to our long-  
ing, our eager immortality within. And could this truth be

generally felt, it would operate the moral redemption of the species from all tyrannies !! But let us resume in summary. This class of physicians is the most numerous, because of their cheapness ; are the most dangerous and mischievous, and the degradation and dishonor of the real science and profession. The most dangerous, because no distrust or suspicion bars them, while the *painted* quack may be distrusted, and kept at arms length ; and his attacks upon public health be restrained to certain limits. The most dangerous, because they can get practice : their views be thoroughly understood, and easily gain access to the common people, whose taste they suit, and who believe every where the letheal error, "*practice makes perfect,*" and *experience is all.* The most dangerous, because they profess to be what the people believe *regular*, clothed with all the powers of the art, are welcome guests, and the most desperate, and all diseases are readily committed to their charge and treatment. To get along, at first, they have sometimes to make *wise faces*, and put on *great looks* ; at last seem to fall dupes to their first deception and believe really, themselves, they are doctors. And considering that talents are generally *cultivated* for towns and large villages which possess the best physicians, the writer ventures the assertion, that these doctors do seven eighths of the practice of the world. This holds pretty true as regards our states ; and according to the calculations of city and rural population by MALT DE BRUN,\* holds nearly true with the civilized world. Let us contemplate the real PHYSICIAN.

What are the views, pretensions, and advantages, which distinguish him from these others ? He beholds the constitution of man as an integral part of the great surrounding universe ; not acting isolatedly, but participating in the actions, and general concern of universal existence. Beholds it under the government and dominion of laws *especially* adapted to it by its Divine Creator ; and, at the same time, subjected to be modified and influenced by the general laws. He looks on it as an individual thing, and, at the same time, as only a part of a greater design. He pulls at the chords which tie it to surrounding existence, and discovers that they extend through and interknit with the whole starry frame ; and, what he might have supposed to be

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\* Physical Geography.



one, is really a part of the whole. Now he invokes the aid, for he needs it, of the universal mind, thought and experience which have lived before him, the life and being of which are in books. Now he is on the vast arena of medicine; his tortured soul struggles by the dim taper of midnight; the field of interminable thoughts before him; and the turbid waves of half thought, half seen truth, or blackness of error dashing round him. Years pass, and he struggles up to the dawn of his Creator's truth—the *truth of all science*. His soul has acquired a new and a more excellent shape; the ideas he has felt, have created for him a new existence; he has lost his local habitation; and lives every where in the things he has seen. In this study, he examines first the actors or instruments of these special laws separately, then, as a whole; anatomy ascertains their mutual relations and adaptations; the sources whence movements spring; their universal subordination and dependence, forming the mysterious circle of vitality. This is the human economy which he is now to consider no longer as a whole, but as a part, an inconceivably small part of another greater economy, that of things. Again he studies the relations, the universal dependence and subordination of the two which constitutes another circle, that of all existing entities, *general physiology*. He sees the eye formed in relation, and acting in concert with the millions of torches that burn above. The eye is now a part of the starry frame participating, nay, an actor in its action. The gravity, which binds his body to the earth, operates in the sun and earth to sustain their relative positions. The same gravity which produces motion in all worlds, may produce frightful *varicocetes* and incurable dropsies, in the lower extremities of a man. Gravity, empiric, may be used as a successful remedy in asphyxia from too great loss of blood, and in other diseases where not all your vaunted vegetable stuffs, nor any other on earth could succeed, may be employed in various doses in the prevention and cure of disease.

Next come under his review, the *heterogenous* or *abnormal* movements. He scrutinizes their phenomena and their order; examines their effects on the tissues, *indurescence*, *ramollescence*—their propagation, irradiation and subsidence; and, as before, their universal subordination and dependence, constitut-

ing a circle, admitting the denomination *mortality*. This is pathology, born in France. Here he learns that *disease* is nothing but *movements* of no new actors, but of the same whose tendency being unsuitable to their make and subordination is to destroy. His mind frets up no spectral form from beneath, which he is called upon to combat. He sees what is, and learns to interpret the awful language in which our common mortality is exhibited and recorded by nature.

Lastly comes the application of the modifiers,—therapeutics, leading in its train natural history proper, or mineralogy, botany, chemistry. In his study of other beings, worlds, he saw in all their actions they did not exhaust their forces, which continued always changelessly the same. Hence no disorder\* or derangement can ever take place in them; can be no disease or death but that they must ever act onward uniformly through space, in their own natural immortality. But, in the system of life, he has seen exactly the reverse is true. Living bodies in their actions, expend their force: they diminish, increase; there is no uniformity, they are never exactly the same. Here, then, is the natural function of all disease, death and the chances of life. Immortality is *impossible* and *unnatural*; and here originates the necessity of all medicine to keep out these chances. What then, I ask, can the real physician do? *He can keep steady and regulate, to a certain extent, this ever tottering, vascillating scale of force, on which all life hangs, by properly removing, supplying, diminishing its accumulations; by diminishing, increasing, removing, varying its excitors.* The ground allotted him by nature, it must be perceived, is extremely small, his interference vastly limited, yet of infinite value and importance to the human race. It is then entirely certain, if he know not these special laws, and the adaptations and relations of the modifiers to them, the chances of every interference he

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\* Before completing his great instrument of calculation, the differential calculus, we would remark, NEWTON made some slight blunder in estimating the apsides of the parabolic curve, and concluded the world would run into disorder every hundred years, and was preserved by Divine interference. With the same calculus afterwards, LA PLACE proved the world to be self indestructible and corrected the error.

makes, must tend equally to death as to life and health. But deplorable! Mankind will remain forever incapable of this truth, rushing upon destiny and the winding sheet while aiming for life; their physician's services, their funeral sermons, mistaken by them for the banquet of health.

——— Official

Man, death will be mad with thee,  
For doing in his absence what  
Was his own work to do.

This is written for the younger part of the profession; and should it excite one to study, the dearest object we had in view will have been accomplished.

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## PART II.

### REVIEWS AND EXTRACTS.

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#### *Medical Magnetism.*

Although mankind have availed themselves of the use of magnetism for purposes deemed of capital importance, as in the magnetic needle &c.; and notwithstanding we believe in the discovery of a new faculty, or properly of that which we call magnetism, that is to say, a *meridional*, as well as a polar attraction, which will become at some future day, subservient to the purpose of determining longitude on any parts of the globe;\*

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\*It is possible the reader may not be aware of the fact, that some thirty-five or forty years ago, Dr. JOEL ABBOT, a highly scientific physician of Washington, Wilkes County, Georgia, during a series of experiments in magnetism, relating to the dip of the needle, &c., discovered a new law of magnetism, whereby it was found to exert a *Meridional*, as well as *polar* attraction. This discovery was so satisfactorily demonstrated, that he felt himself fully entitled to the premium of forty thousand pounds then offered by the Board of Admiralty, for the discovery of longitude, to which purpose it was at once evident that this new law was as subservient as the polar attraction before known was to the other purposes of navigation. But that scientific gentleman, like most men of deep science, was more negligent of the hand-



still we venture the opinion that one of two results of first rate importance is yet to be arrived at relative to this agent. Either will it be discovered to be itself a non-entity, as to its own individuality as a thing of nature, and only a habitude, or mode of action, or the offspring or phenomenon of another principle of far greater universality;\* or that, if it be found to be an independent principle or agent, its powers are yet to be applied successfully alike to purposes of humanity and convenience of even more importance than all its present uses. Of this we see evidence in the authentic truths below stated, displaying its remedial powers in some of the most intractible distresses to which the human body is subject. Tic Douloureux particularly, has never found a uniform remedy, unless it be in the magnet.

some pecuniary reward than of the purpose of discovering a new law in philosophy. In addition to this, he had great-difficulty in procuring the mechanical construction of the simple little apparatus which was to subserve for the mariner the very important purpose of a constant index of longitude at every day and every moment. During the embassy of Mr. CRAWFORD to France, that gentleman was commissioned to procure a part of the mechanical construction from the hands of some competent artist in Paris, which, I think, from some cause never came to hand. It was to consist of a perfect globe of steel equally hardened, and impressed in one particular position with magnetism, and graduated with 360 degrees on the equator, and inscribed with meridional lines; and which when floated in quicksilver, in which it was estimated there could be no impeding friction, would turn relatively to the quicksilver eastwardly in travelling to the west, and vice versa. Around this was to be floated an artificial horizon, with a meridian attached with an index to point out the precise degree and difference of longitude, or distance sailed from the point of departure to that of observation. I am not certain whether it was or not, alike calculated to point out the latitude with the same precision by turning relatively to the quicksilver southwardly in sailing northwardly, &c.

The globe of Dr. A. was subsequently substituted by a section of the globe containing its greatest diameter, or a wheel, alike impressed, with an index springing up from the frame which supported it. This was found to traverse well at sea for several days after leaving Savannah for England, under the management of a Capt. STICKNEY; and again on his return voyage, until he came in the neighborhood of the Banks of Newfoundland; and again on his arrival at Savannah and travelling to Washington in Wilkes, the index pointed out with great definiteness the difference of longitude. All these experiments proved the truth of the law of meridional attraction, for the wheel *did* traverse; but from some imperfection in the construction, it did not continue to do so through the whole of either voyage at sea. This however, the doctor attributed to the influence of the cargo on the metallic axis, in one, if not both instances, and which he suggested the correction of, by substituting non-corrosive axes as of glass or stone.

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\* Electricity.

These facts were published in the London Lancet some time ago, when we had not the opportunity of laying them before the public; but they are of such interest that we are unwilling they should be overlooked by the profession, at least until further experiments verify or condemn the power of the mineral magnet over such diseases.

"Some experiments which seem to promise results of considerable interest and practical importance in medicine, are at present being pursued in certain of the metropolitan hospitals on patients afflicted with neuralgiatic douloureux, tooth-ache, and other immediate affections of the nerves. We allude to the application of a *magnet* to the parts suffering pain from those diseases. We abstain from communicating to our readers at present, any thing more on the subject than we have had satisfactory means of ascertaining to be rigidly exact on the score of truth. Three instances only have, in fact, as yet occurred under circumstances which enable us to speak without hesitation of the power possessed by the instrument alluded to, over diseases of the human frame. These we shall give, observing, that the employment of the magnet has nothing to do with the art denominated "animal magnetism."

Our readers will remember the interesting case of neuralgia of the finger, at St. Thomas's Hospital, upon which Dr. EGGLESTON stated in a clinical lecture, reported in our 48th No., that he had exhausted his store of remedial agents. A more severe case, probably, was never subjected to treatment. The man left the hospital for a time, totally unrelieved, but soon afterwards returned, when, in accordance with a suggestion, as Dr. ELLIOTSON has since observed in one of his clinical lectures, of a correspondent of this Journal, the *colchicum autumnale* was tried in the case, without, however, the slightest benefit being derived therefrom. The sedative powers of the *lobelia inflata* then suggested to the Doctor the propriety of giving the patient the chance of that medicine. The grounds on which it was employed, proved to be in a great measure correctly founded. The man took the lobelia, in increasing doses, every hour, beginning with seven drops of the tincture, and adding a drop to each progressive dose; until as large a quantity had been reached as could be taken without deranging the functions of the stomach. Great amelioration of the affection followed this treatment. The patient who was before unable even to cross the yard, or bear the slightest cutting of his finger nails, and had become ematiated to the extremest degree from pain and sleeplessness, was soon enabled to walk out of doors, and enjoy many hours of rest, recovered his good looks, and became comparatively cheerful.

The relief, however, was very far from being either perfect or permanent. The continued exhibition of the medicine was demanded to secure any portion of rest.

A short time since, however, a new remedial agent presented itself, in the form of the magnet. The hospital was visited by (we believe) Dr. KYLE first, and subsequently by a physician of the name of BLUNDELL, a friend of the former gentleman, who followed up the application of Dr. KYLE. The lobelia inflata was allowed by Dr. ELLIOTSON to be suspended, and the effect of the magnetic tried. That effect was, we learn, a very decided one; the pain was on every application of the instrument, removed, and continued absent for several hours. The distance, however, at which the operator resided from the hospital, prevented, and still prevents, the daily use of the instrument, or, the impression on the patient's mind is that, it would perform a cure.

On Tuesday last, the Dr. BLUNDELL already mentioned, re-attended the hospital at the hour of Dr. ELLIOTSON's visit, when, in the presence of the pupils and our reporter, he drew forth the magnet, and commenced its application to the patient's finger.

The instrument is of the horse-shoe form, about ten inches in its long axis, and five in its short, composed of five layers of metal, the central being the longest, and the whole bound with stout riband. The patient was at the time apparently suffering considerable pain, and unable to use his hand. The *north* pole of the magnet was gently passed five or six times down the sides and back of the middle finger, and then rested on the central joint. The result was, such a cessation of suffering that he could gnash his fingers into the palm of his hand with ease and comfort, and he declared himself to be entirely relieved. The power of the instrument, however, did not cease here. Dr. BLUNDELL showed that it possessed the means of re-producing the pain in the most intense form. The *south* pole of the magnet was directed along the finger. At the third pass, the patient began to bite his lip and close his eyes with an expression of pain. At a few passes more his chin was involuntarily buried in his breast, and his wrinkled features evinced the acutest suffering. This was allowed to continue for a few seconds, when the *north* pole was again presented to the finger, and the agony speedily subsided. The spectators then left the man with a countenance perfectly tranquil.

At the extremity of the ward lay an elderly lady, a martyr to *tic-douloureux* in the lower jaw, extending to the ear, and affecting a large portion of the head. The disease, she stated, was of more than nine years duration, and had never ceased to afflict her for a day during that period, up to her entrance into the



hospital. Her appearance was proportionably miserable. The magnet had also been applied in her case, and with similar advantage as she stated. On the present occasion, it was found on approaching her bed, that she was that morning free from pain, and the aid of the magnet was not needed. "But cannot you show its power by producing the pain?" inquired a bystander. The suggestion was acted on. The south pole of the magnet was passed from the centre of the chin along the lower jaw-bone up to the ear. At the third pass, the poor woman indicated that the *tic* was commencing, and in a few seconds more the affection was experienced intensely. The process was then stopped, as the experiment was carried far enough to satisfy all present of its consummation, and after a brief space the presentation of the north pole wholly freed the sufferer from pain. The operator subsequently stated that by continuing the passes, he could have carried the pain on to the production of delirium.

There is a female patient in another ward, who had suffered intense tooth-ache for three months, when, a fortnight since, according to her own evidence, which we have no reason to doubt, it was instantly cured by one application of the magnet, through the medium of a key, and had not returned in the slightest degree up to the period of the visit on Tuesday last.

These are very interesting facts. We present them to our readers unaccompanied by comment. The specific name given to this instrument by Dr. BLUNDELL, is that of a "mineral magnet." How far its application to disease admits of extension, we are at present ignorant.—*London Lancet.*

*Observations on the Treatment of Typhoid Fever by purgatives.* By M. DE LARROQUE.—*Report to the Royal Academy of Medicine by the following committee: M. M. LOUIS, BRICHETEAU, BOUILLAUD, DOUBLE, BAILLY, and ANDRAL, Reporter.*

GENTLEMEN:—The committee charged by you with the examination of the work sent to the Academy, by Dr. DE LARROQUE, upon the treatment of typhoid fever, by the evacuating method, make through me, the following report upon the researches of that physician, and the results to which he has been led. If, indeed, the pyrexia, called at the present day in France typhoid fever, be only a gastro-intestinal inflammation, if the numerous symptoms which occur during the course of the disease be only the sympathetic effects of a primitive irritation of the digestive passages, the therapeutic question is most simple;

the antiplogleptic method is the only one which should be employed, more or less actively, according to circumstances which the experience and tact of the practitioner may enable him to appreciate.

If typhoid fever having still its point of departure in a phlegmasia of the digestive passages, nevertheless presents this particularity that the follicular apparatus of the intestines is the special seat of the inflammation,—if, in a certain time after the appearance of the lesion of the digestive tube, other symptoms supervene which are not exclusively, as supposed by the preceding theory, the sympathetic result of the intestinal phlogosis, but are attributable to the circumstance that putrid matter within the intestines absorbed, and, like septic poisons, infects the mass of the blood, and consequently the entire economy; then the therapeutic problem presents a greater complication. Independently of the therapeutic treatment which would be still indicated, we should endeavor either to evacuate the injurious matter contained in the intestines, and then the utility of purgatives will be admitted; or, to contend against the infection of the blood, and for this purpose the chlorides, or even tonics might be employed.

Lastly, if in typhoid fever, the intestinal lesion be considered only as one of the elements more or less indispensable, a disease which, differing from true typhus only by a less degree of intensity, attacks like it or like variola, the entire organism, then, the therapeutic questions occupies a new ground. Then, according to the time and the prevailing spirit, two sorts of problems will be formed. In one of these problems, they seek in the midst of the general disorder for some great modification from which they suppose that all the rest is derived; they admit that this modification is always identical, and they consequently employ always the same treatment. Thus, according to some, a super-excitation is the predominant fact, and the debilitating method the only one which should be employed; according to others, on the contrary, an asthenic state, primitive or consecutive, to use the language of BROWN, is the chief pathological condition; the indication is to support the strength of the patient and the tonic medication the most powerful and certain. According to others, the disease consists chiefly in an alteration of the fluids, in the presence of a morbid principle in the alimentary canal, or even in the blood, and the most useful treatment is that by evacuates to expel this morbid principle.

Others form for themselves an entirely different problem; they do not seek to learn the intimate nature of the disease; but they ask if the symptoms which accompany it are not sufficiently distinct from each other to authorize us to unite them under different groups, to each of which, we may be led by experience to

oppose a different treatment. They admit, consequently, an inflammatory form, a bilious form, and an adynamic form, each of which they recognize by the admirable features by which PINEL has depicted them. In each of these forms they employ a special treatment; they declare that, according to age, temperament, constitution, according to the infinitely varying influences, whether physical or moral to which individuals have been exposed, or according to the epidemic character of different times, the one or the other of these forms may be more common than the others, and may require a special therapeutic plan. They observe also a certain number of cases in which from the absence of the symptoms that seem to require an active treatment, they have confined themselves with success to the simple method of expectation, and to the cases of cure thus obtained, they apply this fine passage of SYDENHAM, "*Natura enim sibi permissa negotium suum suo tempore exsequitur ut nostrâ ope, nostris artificiis a que auxilium, non indigeat; suis viribus optime instructa, suis opibus locuples, suo denique in genio satis docta.*"

It is always by following one or the other of the routes which I have just indicated, that physicians belonging to different schools have treated the different forms of pyrexia designated at the present day under the name of typhoid fever. During the last fifteen years, the disease has been almost exclusively treated by the antiphlogistic method which varied only in the degree of activity. However, some practitioners during this period, protested against the universality of this practice, and they professed that there existed certain forms of the disease in which other modes of treatment could be employed with great probability of success, and in the first rank they placed the treatment by emetics and purgatives. One of the most prudent and learned practitioners of the capital, M. LHERMINIER, employed very frequently this plan at the Hôpital de la Charité. This was the commencement of a reaction which has since continued to increase, until returning to a truth whose abuse had obscured its importance, it was ascertained that the proscription of emeto-cathartics from the domain of therapeutics deprives the practitioner frequently of an immense resource, and that these agents may fulfill important indications which cannot be fulfilled by any other.

It is in the midst of this prevailing spirit to return to a certain kind of ideas too completely abandoned, that Dr. DE LARROQUE generalizing in his turn the evacuating method, and not restricting it only to certain cases, employing it during the continuance of the pyrexia; taking no account of the diversity of symptoms, or of lesions, or of the difference of individual pre-



dispositions, endeavors to establish as an invariable treatment in every typhoid fever, the daily use of an evacuant, first of one or two emetics, afterward purgatives administered every day from the beginning of the disease to its termination. M. DE LARROQUE endeavors to explain the constant indication of evac-uants in typhoid fever, by attributing to the bile a great agency in the production of this disease. Collected in the intestines it becomes says he, a powerful cause of irritation to the mucous membrane, and thus the latter experiences phlogosis and ulcerations. If the most serious lesions ordinarily occur near the end of the ileum and in the cæcum, it is because the matter accumulates especially in this part of the digestive tube, which may be shewn by the sound or gargouillement that may be produced by exerting a certain degree of pressure on the ilio-cæcal region ; if, at a more advanced period of the disease, those general symptoms supervene which seem to denote on one hand an alteration of the bowel, and on the other a profound derangement of innervation, it is because the bile and the other matters contained in the intestines have been absorbed, and like true poisons have infected the mass of the fluids, and consequently the entire economy.

These ideas were professed by STOLL in the last century, ideas which he applied not only to the fevers which he called bilious, but also to a great number of other diseases, and hence he inferred the utility of vomits which he so frequently employed. This theory once admitted, would justify perfectly the employment of evac-uants as the general method of treatment in typhoid fever. But against this theory, several objections may be urged ; and in the first place, it has not yet been sufficiently demonstrated that the bile is so altered, and produces so much irritation as to determine the serious lesions which are revealed by anatomy. There are many diseases, during which the patients remain for a long period without any alvine evacuation, and in which although we observed some injurious consequences, we perceive nothing analogous to what occurs in typhoid fever ; it would be necessary then, to admit, that in the latter, the bile and other secreted humours of the intestines possess particular acrid qualities imparted to them by the disease ; but this requires demonstration. The intestinal follicles have been found swollen and diseased as early as the fourth or fifth day of typhoid fever. But at this early period of the infection, especially when a more or less considerable diarrhœa had occurred from the beginning, we cannot suppose that the bile has remained in the intestine sufficiently long to be altered and produce the disorders. In cases which terminate unfavorably after the daily administration of purgatives which do not permit the

bile to remain in the intestines, we find the same follicular lesions as in those cases which terminate fatally without the use of any means to procure evacuation.

Thus, then, the theory of STOLL which refers to the presence of the bile in the intestines and to the alteration which it there experiences, either the fever itself, or the most serious accidents which accompany it, is at least very contestable.

The cases contained in the different memorials which M. DE LARROQUE has sent to the Academy, are more than one hundred. They have been collected under his eyes, by the pupils attached to the Hôpital Necker; they present almost all the possible forms which typhoid fevers can assume from that in which it resembles a simple gastric derangement or embarrassment, or a slight enteritis to that in which it is accompanied by the most serious ataxic, or adynamic symptoms. In all these cases, a uniform treatment was employed; at first he administered one or two grains of tartar emetic, which he prescribed in every form of the disease, and whether the tongue was moist or dry, red or pale, &c. The next day M. DE LARROQUE gives a bottle of seidlitz water, and repeats it as long as the febrile state continues. If the patients take a dislike to this kind of purgative, he gives cream of tartar, calomel or castor oil. Toward the end of the disease, when the febrile state has almost entirely disappeared, he gives tonics to support the strength, and is not very slow in allowing food to his patients. Barley-water or lemonade is the common beverage during the disease. No accident induces him to modify this treatment except it be pulmonary engorgement, when he employs kermes mineral. He declares that sanguine emissions should never be employed in typhoid fever, and that the cases which he has seen terminate fatally, notwithstanding the evacuant plan had been treated at first by more or less abundant venesection. The abstraction of blood according to M. DE LARROQUE, places the patient in a condition the most unfavorable for a cure; he cannot, however, be ignorant that many typhoid fevers are combatted by sanguine emissions, with an energy justified by incontestable success.

As to the influence exerted by the evacuating plan repeated each day upon the mode of termination of the disease, it is indicated in a statistical table which he has annexed to his work. In one hundred cases, ninety were cured; ten only had died, and among the latter the treatment had been commenced in several only under desperate circumstances, while others had been bled more or less copiously. This mortality of patients with typhoid fever treated by the plan of M. DE LARROQUE, is certainly smaller than that of patients treated by any other method. This result is confirmed by the testimony of M.



BEALL. We may observe that in England, the majority of practitioners treat the continued fevers, which answer by their symptoms to our typhoid fever by the daily use of emetics, and particularly of purgatives. Lastly, M. BRETONNEAU, a few years ago advocated the use of saline purgatives frequently repeated as the best treatment of dothinenteritis. M. PIÉDAGNEL has treated by M. DE LARROQUE's method, one hundred and thirty-four cases of typhoid fever; he has not however, employed this method in all its exclusiveness, thus sometimes he has practised venesection and has seldom provoked vomition. In these one hundred and thirty-four cases, he lost nineteen, or one seventh, a remarkable result, but not as satisfactory as that obtained by M. DE LARROQUE. M. LOUIS has employed the same plan upon thirty-one patients *manifestly* laboring under typhoid fever; twenty-eight were cured and three died, or about one death in ten. The reporter of your committee has subjected forty-eight patients to the same mode of treatment within the last three years. In all those patients, without exception, who at the beginning of the treatment presented only slight symptoms, such as those which answer to the inflammatory bilious or mucous forms, the termination was favorable. The number of such patients was thirty; eleven others were subjected to the same treatment. When they had already reached a very serious state, nine were restored and two died. Upon seven other patients, the treatment was commenced when the ataxo-dynamic symptoms had acquired a high degree of intensity, and six of them died. Thus, then, in forty-eight patients, eight died, which brings the mortality to one in ten.\* If we unite the cases of M. M. DE LARROQUE, PIÉDAGNEL, LOUIS, and those of your reporter, we have a total of two hundred and thirteen patients, of whom forty died, making the average mortality a little less than one seventh.

From the facts above exposed, we may say that many serious cases were benefited indubitably, while the evacuants were daily administered, and that in the light cases the disease did not get worse in consequence of the administration of the evacuants. And, indeed, thus treated, all the latter cases terminated favorably. We must therefore conclude, that if the evacuant method have not a well demonstrated efficacy in the cases which were already serious when the treatment was commenced, at least it does not most commonly transform the slight into serious cases. This would certainly not have been admitted a few years ago, when most physicians believed that the administration of an emetic or of a purgative in typhoid fever would necessarily aggravate the disease, and hasten the super-

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\* Nearly two in ten.



vention of the adynamic and ataxic symptoms. We have however, seen things occur differently under our eyes—we have seen during the daily administration of seidlitz water, the tongue preserve its moisture, to be cleansed, the bad taste of the mouth disappear, the thirst diminish rapidly, the epigastric pain cease, the frequency of the pulse diminish, the cutaneous transpiration diminish, the cephalalgia and vertige lose suddenly their intensity, the expression of the countenance revive, &c.

We should therefore be indebted to M. DE LARROQUE for having recalled attention to one of the most important therapeutical questions of which so many different solutions have been given. Your committee thinks that the work of this gentleman ought to be taken into serious consideration, but at the same time it believes that it would not be consistent either with the dignity of the Academy, or with the interests of the science to pronounce a definite opinion upon the treatment employed by him in every case of typhoid fever. Before this treatment can be thus adopted as the best in all cases, it will be necessary not only to have collected one or two hundred cases which testify in its favor, but to have observed such cases for several years, and under those different atmospherical influences which by succeeding each other produce such remarkable changes in the gravity of diseases, and consequently vary the statistics of our success in therapeutics. Who does not know that in certain years all the cases of pneumonia are mild, and recover, whatever may be done? While another year they have a singular character of gravity, and produce a frightful mortality. Who does not know that in some months all surgical operations succeed in our hospitals, while at another time they are all fatal? Hence the danger of solving therapeutic questions by the numerical method, if we do not weigh all the cases at the same time that we count them, if we do not analyze scrupulously and minutely the value of each of the facts to which we are to give the value of a unit.

To prove the necessity of precaution in applying statistics to therapeutics, permit me to cite another result published in London in 1780 by CLARK, in a collection of cases of continued fever. From 1777 to 1779, he treated in the Dispensary of that city, two hundred and three cases of continued fever, with all the characters of our typhoid fever, mild and severe. In this number he lost only six patients, or one in about thirty-three, a greater success than occurs in our modern statistics.

How did he treat them? None were bled, except two of the three who had a complication of pulmonary phlegmasia. All took at first one or two emetics; they were afterwards subjected to the use of simple diluent drinks, and subsequently all without exception took quinine. If we regard only the statis-

tics, this, without doubt, would be the best treatment. But it is not reasonable to proceed in this manner. Although numbers should assert the contrary, we could not be convinced that the same mode of treatment suits all the numerous varieties of typhoid fever. We agree with most of the great masters who have preceded us in our difficult and laborious career, that in every malady, whatever may be its seat and whatever its nature, certain general states of the organism may supervene, which by changing the physiognomy, complicate the nature and modify the therapeutics. In each case we may find special indications to be fulfilled. Thus there are cases, in which instead of treating pneumonia by sanguine emissions, we may be led to the use of quinine or of opium; in such cases, the disease remains the same for the scalpel of the anatomist, but not however for the physician, in whose eyes the anatomical lesion can be only one of the numerous elements, the notion of which directs him in the determination of the therapeutic means. Shall I refer to those different diatheses, those idiosyncrasies, those special modes of feeling and of reacting which each new patient in some sort presents. If this be true, if there be no morbid case which resembles absolutely all those which have preceded it, and all those which will follow, what precaution should be employed, and how much are we exposed to error, if to appreciate the value of this or of that treatment, we take as the only element of judgment, the more or less considerable number of cases in which it has been employed. We apprehend that in this circumstance as in many others, the majority is not always right. By this mode we operate upon quantities which are not of the same nature, and if this circumstance be neglected will not the most complete deception ensue?—*Journal des Connaissances.*

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*On the use of Digitalis in Dropsy.—By Dr. SIGMOND.*

Some years ago we read some remarks in the Boston Medical and Surgical Journal, (perhaps before its name was changed,) on the use of digitalis, with which we were greatly interested; not less by the important information they contained as the results of experience, than by the noble ingenuousness which dictated the plan of communicating that information. It is common enough for practitioners to tell of their brilliant successes with their plans of practice. Indeed, it is too often the case that the eye of observation is jaundiced—sees nothing but its own peculiar color; or sees no beauty in any other, if it

perceive it at all. And we know of no worse promise of success—no more certain presage of a career of ill success, or no success at all, for a time, than that which is found in an unwillingness to be taught by the truths of nature and of experience, and in its stead, a determination to adhere to a previous opinion with an unwillingness to see it tortured by a rigid rational analysis. This becomes no age nor individual even in his own private business; but is perfectly inexcusable in any business where the public weal is at stake; and in none more so than in medicine.

But in justice to the present day we must say that the spirit of *eclectism* now prevailing to some extent, if it go not to ridiculous ultraism as every thing else seems prone to, has in its elements the power, and thus far promises well for arresting the wild vibrations of science at a proper equipoise between erroneous extremes, and settling it, at least upon many points, on the firm, honest basis of truth. The author to whom we have related above, (and we regret, for his honor's sake that we have forgotten his name,) came to the conclusion that science and humanity would be more benefited by his pointing out his ill successes, and candidly acknowledging their causes—thus serving the profession, as a wreck, or beacon, or a chart does the mariner, than by a narrative of the most brilliant successes. We see a similar spirit now manifested in some of the greatest men of the day, as ANDRAL, &c. But to the point.

The writer to whom we have alluded, selected *digitalis* as the first article, on whose powers he should tell the tale of his misfortunes. At that time this article was lauded for its powers, (powers too, which every body wanted,) of depressing the pulse, directly (was the idea,) as a sedative power; and it had become not uncommon to prescribe it for this purpose alone, instead of *real* sedative and antiphlogistic powers. In this state of things, and if our memory serve us, when used with these views, those observations went to prove that it was, in general use, a most hazardous power—that sometimes sudden deaths occurred from the first dose of ten drops of the tincture; and that again, the dose might be increased to thirty or forty drops or more, without the least obvious effects of any kind, until, suddenly, and without any premonition, an accumulated power would be manifested



overwhelming with sudden death, as if a tenfold dose of the poison had been taken at one time—all proving at least, that its powers, the most desirable in some (uncertain) circumstances, nevertheless in others, (and equally uncertain why,) were those of a most deadly narcotic poison.

But gravitation, which precipitates the mighty cataract to the depths below, or the frozen avalanche, or the floods of burning lava from the mountains' top to the plains below ; or the lightening of the clouds, with power immeasurable, and which have produced so much destruction of human life—these have been tamed by the benign influences of science, and turned into life-preservers at the order of man. And who can tell but that lobelia, the present great slaughterer which, like a ruthless torrent, is now running its devastating course over the whole land, may, in the course of time, become, under the auspices of true science, a safe antidote for many ills. But we have been pleased to see the following observations by Dr. SIGMOND, on the article of *digitalis*, which we insert below from the Boston Medical and Surgical Journal. A spirit of perfect candor and honesty of purpose pervades them which cannot fail to please, and to excite the confidence of the reader, whilst they at least afford a rational discrimination of the circumstances calculated to favor the safe, and even useful employment of this active medicinal agent. We hope Dr. SIGMOND has at least opened the way to observation, that its injurious effects may be prevented, if he has not rendered it a safe and useful article in the hands of the profession.

“ You must be made aware that dropsy is to be considered as the prominent symptom of some morbid condition of the body. It is not an idiopathic disease, but it is the result of some unwonted action, into the nature of which, before you search for your remedy, you must carefully inquire. To obtain a relief from the discharge of the fluid is of course an object of anxious consideration, but beyond this you must ascertain what has been the predisposing, what the exciting cause, whether any other remedy may not be more effectual, whether the constitution of the individual is such that you may prescribe an agent which, when it does not produce good effects, may become the source of mischief, and, indeed, be more detrimental than the disease which you undertake to cure by it.

Nosologists have applied the name dropsy too indiscrimi-

nately; they have merely taken the striking symptom, and the locality in which the hydropic effusion has occurred, as the sole objects of their attention. The disease is, however, anything but uniform in its character, in the causes from which it arises, or in the effects which are consequent upon it. The states of the system in which it makes its inroads, the various diseased organs which produce it, the morbid conditions of which it is a sequela, the variations apparent in the urinary secretion, the diversities of tissues liable to its influence—all demand the most earnest attention, and must, in every individual case brought before you, be the subject of your inquiry before you can employ to advantage the remedies which have been placed in your hands.

Since the days of ARETÆUS, we have gained great experience; and we cannot, at the present hour, coincide altogether with the remark with which he commences his chapter on dropsy, that “very few recover from this disease, and those rather by good fortune, and the kindness of the gods, than by our science, for the gods alone watch over great events.” We must attribute all we know to a supreme power; and it is by examining and availing ourselves of all by which we are surrounded, that we best show our gratitude, and we have been taught that there are conditions in which relief can be decidedly afforded by the art that we have studied.

To remove simple effusion, where no diseased viscus is present, is by no means a difficult task; but we have other objects in view. Sometimes we are called upon to alleviate the most acute suffering, which arises from water in the chest and in the abdomen, where we know that no effectual cure can be contemplated, and therefore we require to have in our possession varied means of action, to know when each is to be employed and when it is to be avoided. In some instances, a combination of medicines will materially assist us, and, as Dr. FERRIAR has shown, a mixture of many liquid diuretics will be found eminently useful, and where digitalis is properly united, it is invaluable. It is one of those medicines which prove the fallacy of the homœopathic doctrine, for, prescribed with other drugs, its beneficial consequences are oftentimes more striking than when alone. Dr. FERRIAR has upon this point somewhat a fanciful idea, but there appears, in the general principle, much soundness of judgment. He says, that he has been led by observation to suspect that there exists, in the relative effects of medicines, something similar to the harmony of colors and sounds, and that the impulse requisite to the living powers of the body, which cannot be produced by a single impression, may be effected by a concurrence or succession of impressions, in some measure dependent on each other. His “Observations on the Treatment of Dropsy,” and his com-



parison of "The Remedies of Dropsy," two admirable papers, which are to be found in the three volumes which contain his medical reflections and histories, fully bear him out in his practice, if they do not in his theory. His prescriptions are well combined, and discriminately applied. They are not, as CRASHAW has very fairly termed some of those "farragos" which are occasionally seen in chemists' shops, "certain hard words made into pills," but they are compositions which deserve attention and imitation.

With regard to the peculiar state of an individual who is laboring under effusion, you will find that digitalis will not only, generally speaking, be useless, but occasionally injurious, when there is great natural strength and vigor, which have been unimpaired by the ravages of disease, where the muscular fibre is tense, the skin hard and dry, if the individual be inclined to corpulence, if the countenance be at all indicative of determination to the head, or venous retardation, or if the habit of the bowels be slow and difficult to be called into action."

This last sentence of Dr. SIGMOND is invaluable. It should be written in capitals across every treatise on digitalis. It is the only rational approach we have seen to correct therapeutics in the prescription of digitalis, and being observed in prescription is one great step in the first place, towards preventing the injurious effects of the article in question, and in the second, towards securing its valuable operation with great uniformity. In the next sentence, on the other hand, we find, alike perspicuously set forth, and again proving a clear discrimination, those states of the system in which the happy effects of digitalis as a diuretic, may be expected.

"Dr. WITHERING first drew the distinction of the cases of hydropic effusion in which digitalis would be found unsuccessful, and, I believe, the great majority of medical men who have been in the habit of employing it, coincide with his view, and the experience of the most acute and intelligent practitioners has, on the other hand, satisfactorily demonstrated that there are states in which it is pre-eminently efficacious. In weak, delicate, irritable constitutions, where they may be present much laxity of fibre, a thin, soft, smooth, pale skin, which in the anasarcaous limb seems to be transparent, when upon pressure by the finger on the surface there appears to be no elasticity whatever, but the impression sinks in deep, and there is no evident power of resistance; when the emaciation of the other parts of the body is very striking, where the countenance is pale, where



there is feeble or intermitting pulse, when the constitution has been much broken down, more particularly if it were originally strong, sound, and robust, where any indulgence in spirituous liquors, bad habits of life, the action of mercury, or any debilitating cause, has produced the mischief—in such states digitalis will be indicated in preference to most of the diuretics, of which I shall hereafter have to speak. You must remember, however, that it is merely the evacuation of the hydropic fluid that you will effect; but you have not advanced more than a step in the cure of disease, more particularly if that disease be connected with disordered state of the viscera, or if it be attended with paralysis. It, however, will do that which sometimes is of as much importance as any object you can have in view; it will alleviate the most distressing symptoms, and you will gain time, during which the system may be enabled to rally, and then sustain the impression of well-directed energetic remedies. Many have been the contradictory statements made of the diuretic effects of digitalis, in consequence of the want of attention to these principles, which you will find to be of vital importance to you, and you will not fail in giving relief where you judiciously employ digitalis. You will frequently be astonished at the quickness with which the fluid is evacuated; but you must not be surprised at the rapid accumulation which may again take place, when you remember what I have told you, that you do not influence the disease which caused it.

The man whose name I scarcely ever venture to pronounce without expressing my admiration—**SYDENHAM**—gives, with that sincerity and love of truth which distinguishes every word that fell from him, a very happy illustration of prescribing for the name of a disease without inquiring into its causes. He was called on to attend Mrs. **SALTMASH**, of Westminster, who had the dropsy in the greatest degree he had ever seen, her belly being swelled to an incredible size. He gave her an ounce of syrup of buckthorn before dinner, according to the custom of the time, and it brought away an almost inconceivable quantity of water, without causing any disturbance or faintness. Encouraged by this, he gave her, every day, interposing a day or two occasionally, a smaller dose until she recovered. He says, this was twenty-seven years before he wrote his treatise, and the lady was his first dropsical patient. Being young and inexperienced, he could not help thinking that he was possessed of an infallible medicine for the cure of any kind of dropsy; but in a few weeks he discovered his error, for, being soon after called on to attend another woman afflicted with the dropsy, which succeeded an inveterate quartan fever, he gave the syrup, and repeated it frequently, increasing the dose by degrees; but having

ineffectually attempted to evacuate the water; inasmuch as the medicine did not operate, and the swelling of the belly increased, she dismissed him; and he adds, "If my memory do not fail me, she recovered, by the assistance of another physician, who administered more powerful remedies."

It is upon the heart and arterial system that digitalis acts; it decreases the irritability of the constitution, it diminishes the frequency of action of the heart, and hence the circulation through the system is so slow, that the kidneys have more time to take from the blood the watery portion which they excrete, for we have no reason to believe that those organs are stimulated to any increased action by the herb. The physiological reasoning upon the action of digitalis has been considered to be obscure, from its having been supposed that it diminished action in one instance, and excited it in another; but I should attribute the apparently newly-acquired energy of the kidneys, not to any stimulus imparted to them, but to their having a longer period to act upon the fluid which is detained in the renal vessels. Some authors have contended that digitalis is a powerful stimulant, that it produces flushed face, hot skin, restlessness, and all the symptoms of febrile action; and this you will find to be the case where, from a diseased state of the kidneys, the due separation of the fluid from the blood does not occur, or where, from pulmonary disease, the due transpiration does not take place; for the system of circulation is slowly carried on at first, but if no elimination from the blood occurs, the whole frame is thrown into disorder, and a febrile state is produced.

Some believe that digitalis only acts as an indirect sedative, and only when it accumulates in the system, and the experiments of JORGE, at Leipsic, are referred to; the herb was given to individuals in a state of health, in doses of a quarter of a grain of powder increased to three grains. It produced upon the alimentary canal marked effects, and this also occurred to SANDRART in his trials, when the digitalis was administered in powder; but I have before observed to you, that, in this form, it is liable to produce considerable irritation of the stomach: it likewise influenced the brain, a state resembling intoxication coming on. Upon the generative system its power was strongly marked, even to the excitement of seminal excretion in the male. and symptoms similar to the premonitory sensations which females experience at particular periods.

All these phenomena may depend upon the retardation, in the capillary vessels, of the blood; Dr. MOSSMAN, in the year 1806, was the first who drew the conclusion, from its influence on the minute arteries, and the diminution of vascular action, that it was strictly a sedative; he went so far as to state that he could



obviate pneumonic inflammation with as much certainty by it as he could arrest the progress of an intermittent fever by means of the bark of cinchona. To his other observations I may, in my next lecture, draw your attention when we come to notice the effects of digitalis in inflammation and in phthisis.

I cannot, either with justice to myself or to this very important disease, detain you much longer upon the influence of this herb on dropsies, more especially as I shall hereafter have fuller opportunities of explaining to you the effects of diuretics, but I must observe that, in hydrothorax arising from any obstacle to the circulation, such as hypertrophy of the heart, when it is the termination of long protracted diseases of the thorax, if they be not accompanied by disordered conditions of the valves of the heart, digitalis may be employed. In ascites, in anasarca, dependent upon disordered states of the exhalent vessels, which throw out a larger quantity of fluid than can be absorbed, you produce good effect by diminishing the impulse with which the blood is directed to the capillaries, and you present that fluid to the kidneys for a greater length of time, in consequence of which they can take up more to excrete than would otherwise be the case. In ovarian dropsy it seldom is found that digitalis succeeds; in hydrocephalus, in infancy, it is highly noxious. Few states of the system have had more diligent inquirers. Amongst them, WELLS, BLACKALL, PARRY, ABERCROMBIE, AYRE, YEATS, BOSTOCK, BRIGHT, GOLIS, CHEYNE, have most indefatigably labored, and the analysis of the urinary fluid has been of late years looked to with the hope of obtaining a fresh source of information. Many prefer ample depletion before the exhibition of this remedy, but I think you will generally find that when you must lower the system previously, other diuretics will be more serviceable, and I would strongly urge upon your minds, as I think it a matter of deep importance, to avoid, if possible, the junction of these two means of cure. It is true that after venesection digitalis is more diuretic, but the most fatal effects have occurred from giving the herb, where blood-letting has taken place. To use an expression which I have somewhere seen—"It kills the heart."

During the action of digitalis for the cure of dropsy, the recumbent position is preferable, for, from the experiments of Dr. BAILDON, detailed in the "*Edinburgh Medical Journal*," for the year 1807, we learn that it decreases the action of the heart most when an individual is lying down. He observed in his own case, and he repeated the experiment several times, that after digitalis had taken its effect, as long as he stood erect, his pulse, which was upwards of 100, had not lessened in frequency; when he sat down it became about 75; but when he lay



upon his back, it fell very considerably, and became as low even as 40. Dr. BAILDON found that the same effect was produced upon all those patients to whom he had thought it proper to administer the herb. This effect is one of the most astonishing facts in our history of this sedative; it is very singular that it has not excited more attention, and led to some decisive experiments. Although Dr. BAILDON's trials of this interesting substance have been detailed by a vast number of authors, there does not seem to have been drawn from them that result which minute investigations would most probably afford to us in our practice.

There is almost always some degree of nausea, of hunger, of uneasiness, of general irritability present, whenever digitalis is given; indeed it would almost appear to be necessary for its salutary influence to be produced, and Dr. PARIS has a very judicious and a very practical remark upon this point, which I think will be fully borne out by all those who use it, that every attempt to prevent these unpleasant effects, or to correct the operation of digitalis, by combining it with aromatic or stimulant medicines, seems to be fatal to the diuretic powers of the remedy: he has likewise quoted Dr. BLACKALL, who objects, in some cases, to the union of mercury, digitalis, and squill; to the combination of the two latter, however, I do not think the same objections arise as to the first.

In some individuals the miserable train of sensations that follow upon the employment of this remedy, precludes the possibility of persevering in it, even when we perceive that it has been successful; nausea, vomiting, excessive depression of spirits, and fainting, often prevent us from proceeding further with it, and as any attempt then to combine it with any drug that might be supposed to obviate its bad influence destroys its efficacy, we are obliged to abandon it altogether.

There is a point at which we can no longer administer digitalis; this is generally ascribed to its accumulation in the stomach, but it seems to be rather dependent upon the very low tone to which the vascular and muscular symptoms have been lowered, for neither by vomiting nor by purging has any portion of the digitalis been thrown off, and the same effects are visible if the endermic mode of acting upon the system have been pursued. It is generally at about the eighth dose that the baneful influence of the herb is visible, and this often happens whether the dose have been large or small, whether it have been diminished or increased, whether it have been given twice or three times in the course of the day; some curious examples have been quoted by SANDRAT in two papers which appeared in the "*Bulletin Général de Therapeutique*," in the year 1833. They present some very extraordinary results from its continued use; his

cases were principally diseases of the heart; out of 57, 31 had maladies of that organ, 13 being hypertrophy without dilatation, eight hypertrophy with dilatation, and eight dilatation without hypertrophy; they fully bear out the great necessity of caution which the wisest and most experienced men of our own country have so strongly inculcated; he seems, with Dr. HAL-LORAN, Dr. HAMILTON, and others, to consider it as a narcotic, first stimulating, and afterwards acting as a sedative. When the poisonous effects are produced after the symptoms of disturbance of the alimentary canal (indicated by the vomiting and purging, then vertigo, drowsiness, and frequent faintings) come on, the skin is bedewed with a cold sweat, the tongue and lips swell, profuse salivation occurs, sometimes the action of the kidneys is totally suspended, at others it is increased, with frequent desire to expel the urine, or at others inability to retain it is felt; the pulse intermits and is slow, and delirium, hiccoughs, cold sweats, confused vision and frequent faintings follow, till death closes the scene.

Dr. HENRY gives us an instructive example, in the eighth volume of the "Edinburgh Medical and Surgical Journal:"—A female, laboring under dropsy, took an over dose of a decoction which had been made by boiling two handfuls of the leaves in a quart of water, then pressing the mass so as to express the whole of the liquor. At seven in the morning she drank two tea-cupfuls, amounting to not less than ten ounces by measure. In an hour's time she began to be sick, and vomited part of the contents of her stomach. Enough, however, was retained to excite vomiting and retching throughout that and the whole of the following day, during which everything that was taken was rejected. In the intervals of sickness she was exceedingly faint, and her skin was covered with a cold sweat, the tongue and lips swelled, and there was a constant flow of viscid saliva from the mouth; very little urine was voided on the day she took the digitalis, and on the following days the action of the kidneys was entirely suspended; when Dr. HENRY saw her, which was 48 hours after she had taken the poison, the tongue was white, the ptyalism continued, though in a less degree, and the breath was fœtid; the pulse was low, irregular, not exceeding 40, and after every third or fourth pulsation an intermission occurred for some seconds; she complained also of general pains in the limbs, and cramps in the legs. By the use of effervescing draughts, and ether with ammonia, she gradually recovered from her imperfect health. Dr. HENRY states that she had taken no mercury, and that the ptyalism was the effect of the digitalis.

Professor BRANDE, in his "Elements of Pharmacy," gives an instance of that carelessness which is sometimes met with in



our public institutions, where those who order an important drug, forget to give the necessary caution, and the patient continues to take daily, without having any one to watch its effects, an energetic poison as a remedy. He says that he knew an instance of a person who suffered under anasarca of the legs, and who applied for relief to a dispensary, where he received a box of pills, one of which he was directed to take three times a day; on the evening of the third day, he complained of great debility and faintness, and in the course of the night vomiting and fainting came on; in the morning he died upon attempting to get out of bed. This sudden death, from the influence of digitalis, is by no means an unusual event; and hence, it is advisable, that when it has been administered for a short time, exertion should be avoided, and the patient kept in a recumbent position; the slightest movement may prove fatal, for the pulse instantaneously quickens, the heart throbs and labors excessively, and fainting occurs from which there is no recovery; not only have there been such instances of sudden death during the administration of the medicine, but even two or three days after it had been discontinued. It has been very properly described by my late valued friend, Professor BURNETT, in one of the best works on botany that we possess, his "Outlines of Botany,"—"as one of our most beautiful native plants, and one of our most active indigenous medicines and insidious poisons. Its influence over the action of the heart, and its power of reducing the rate of the sanguineous circulation, would alone render it an important remedial agent, but when to the above are added the collateral effects on the kidneys and salivary glands, and its peculiar characteristic of lying, as it were, for a time, latent, and accumulating the power of repeated doses, so that by one fell swoop the heart is in a moment palsied, and life at once extinct, it must be acknowledged that it is a most fearful as well as useful drug."

Few medicines have been more fairly tried as an iatroleptic or cutaneous medicament in France, than this has been in the cure of dropsy, and it has answered the most sanguine expectations that had been formed of its efficacy. Dr. CHRESTIEN, to whom we are much indebted for his experiments, has given us a fair narration of the cases in which he was successful, and those in which he failed. He is borne out in his practice by M. CROS ROGERY, of St. Geniez; by BERNARD, of Bezieres; by BLAVET, of Monthozin; by ROUCHER, of Montpellier; and by ARCHIBOLD ASPOLD. Under M. ROGERY's treatment by the friction with digitalis, a case of dropsy of the abdomen, which followed upon a repelled eruption, was cured. Under Dr. CHRESTIEN, dropsy, the sequela of scarlet fever disappeared; and dropsies consequent on vascular inflammation, and on splen-



itis, after intermittent fever, have yielded to friction upon the hypogastrium, with tincture of digitalis, three times in the course of the day. The tincture is made by macerating, for a quarter of an hour, an ounce of the leaves in three ounces of alcohol. The method employed by BRERA, which was the first introduced, and therefore somewhat rude, consisted in macerating the digitalis in saliva, and then applying it by friction on the abdomen. I drew the attention of the profession to what had been done in this way, in France, three years ago. I have tried the system, but do not find it as successful as the internal administration.—*Boston Medical and Surgical Journal*.

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*Clinical Surgery.—New Doctrine of Erysipelas.—By M. BLANDIN, Surgeon at Hotel-Dieu, of Paris.*

In reasoning upon the nature of this disease we must inquire into its cause for it does not commence in the wards of the physician in the same manner as in those of the surgeon. There exists then, an etiological nature. This may be internal, and then the disease exists in the entire economy before it acts locally—or may be external, and arises most commonly from a contusion, a wound or an operation. Here the affection is altogether local at its commencement. This cause is easily appreciable. It is not so with the other. We frequently see epidemics of erysipelas. These, for want of greater precision, have been referred to a miasmatic constitution. But we find also in the wards of the physician, isolated cases of erysipelas, which are truly sporadic, and for which no special cause can be assigned.

These two kinds of erysipelas pursue a course whose difference depends upon their etiological nature. The erysipelas which arises from an external cause, and which is at first local, has a tendency to become general. The fluids being altered by the disease, and having a concentric direction, are soon disseminated throughout the economy, and excite a violent reaction.

The erysipelas which arises from an internal cause, on the contrary, and which is at first general, tends to localise itself. It is a critical effort of nature which directs towards a single point, the disturbing element that had created a derangement at once in the entire system. Would it not result from this theory, that the febrile reaction should predominate from the commencement in the erysipelas of internal cause, and at a later period in the erysipelas of external cause? It must be confessed however, that as the latter occurs almost always in consequence of wounds, contusions, ulcers, operations, the traumatic fever must mask that which is excited by the erysipelatous complication.

### Anatomical Nature.

Most pathologists admit that erysipelas is an inflammation ; but this word, so vague in its nature, does not specify any thing with respect to the seat. It is a cutitis, say almost all authors. But there is much more than a cutitis ; the pre-existing, dominant element is an inflammation of the lymphatic radicles of the skin.

Such is the opinion of M. BLANDIN. It had however, been surmised partly by other authors. Mr. RIBES had perceived in erysipelas something of a capillary nature. He was however, more inclined to believe in an inflammation of the venous, than of the lymphatic radicles.\*

DANCE has observed them in erysipelas of the head, nothing is more advantageous than the application of leeches over the lymphatic glands at the base of the maxilla. Was not this admitting in practice, that the inflammation affected more particularly the system of white vessels ? M. CHOMEL is still more formal. Whenever, says he, an individual is affected with chills, nausea, horripulatio, red lines under the skin, and pain in the sub-maxillary glands, he will have erysipelas of the head. The lymphitis then, not only predominates but it pre-exists. Another proof of the lymphitis is that in patients convalescent from erysipelas, there often supervenes an œdema, which must be the consequence either of a venous or of a lymphatic inflammation, or of the obliteration of the vessels which carry the lymph. We have then in erysipelas, first a capillary lymphitis, and subsequently a cutaneous inflammation.

But these two elements are not in equal proportion. In erysipelas, which arises from an internal cause, it is the cutaneous, and in traumatic erysipelas, the lymphatic inflammation which predominates. It is this circumstance which determines the difference of their gravity. The former is most commonly produced by a miasm, which disturbs the entire economy, but an erysipelas like that of the face exhausts the morbid cause. Traumatic erysipelas, on the contrary, invades the organism instead of quitting it, and the lymphatic vessels convey to all the tissues, according to their course the fluids which have been altered by the influence of a violent phlegmasia, at first local, and afterwards concentric. These are positive facts, says the author, and how frequently do we see women die with the uterine, inguinal, and femoral lymphitis described under the name of *phlegmasia alba dolens* !

\* M. RIBES declares that he has found pus in the venous radicles. But this fact is rarely met with in erysipelas, and besides may it not be attributed to imbibition.

Ed. of *Journal des Connaissances*.

It is for this reason that erysipelas is generally regarded as a much less serious affection by physicians than by surgeons.\*

Erysipelas arising from an internal cause is most generally stationary; the other, on the contrary, extends almost always concentrically towards the trunk, and when situated on the trunk, is directed sometimes superiorly, sometimes inferiorly.

The phlegmasia extends in the lymphatic net work, following the direction of the vessels; thus we see red lines, before the redness and tumefaction of the skin.

There are however, some cases of traumatic erysipelas which pursue a course towards the extremities, and the wards of M. BLANDIN recently presented an example of this fact. It is because lymphitis does not always proceed concentrically. The same is true sometimes of phlebitis. But these cases are exceptions.

### *Prognosis.*

This can be readily inferred from what we have already said. Thus traumatic erysipelas, or that arising from an external cause is much less serious than the other variety. There are some cases which are owing both to an internal and an external cause, as when the disease supervenes around the wound of an operation performed during an erysipelatous epidemic, the patient will most commonly feel the effects of the lymph conveyed to all the tissues, and also the effects of the atmospherical constitution. This is a most serious complication, and was most probably the case in a man who died recently in consequence of an erysipelas which supervened after the amputation of a toe.

### *Treatment.*

The treatment employed by M. BLANDIN is peculiar to himself, and is based upon his theory. As to the erysipelas from an internal cause, little is to be done. We know not the nature of the miasm which has produced it. Every treatment directed against it is purely empirical.† But as we are acquainted with

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\* May not erysipelas which arises from a simple internal cause, be considered as an eruptive fever and treated as such, by respecting the eruption, by favoring it by means of moderate perspiration, by recalling it to the surface when metastasis to an important organ exists, by observing the symptoms and employing venesection and baths to moderate them when too violent? *Ed. of Jour. Conn. Med. Chir.*

† It is perhaps gratuitous to assert this pretended benignity of erysipelas which arises from an internal cause; for according to his own avowal it occurs almost always at the face, and too often terminates fatally. Besides, the extension of erysipelas from the face toward the neck, that is to say, along the course of the glands, is much less serious than its extension to the scalp.

*Ed. of Journal des Connaissances Med. Chir.*



the nature of the erysipelas which arises from external causes, we should abstain from all compression of the wound, from all irritating applications, and especially from the use of adhesive strips which exert a tonic and exciting action; we should have recourse to the lightest and mildest dressing. So much for the local traumatic surface, and thus far all practitioners agree. But the same harmony of opinion does not exist with respect to the rest of the treatment.

Some have thought it advisable to act upon the altered fluids by means of tonics. But this is pure empiricism; for what proves that quinine, for example, corrects the alteration. Tonics seem much better calculated to increase the inflammation, and should be used only in cases of well marked adynamia. Others, and at their head are CULLEN and DESSAULT, have advised emetics and purgatives. M. BLANDIN has not obtained much success from their administration. Blisters have been recommended. DUPUYTREN sometimes employed them in the centre or at the margins of the diseased surface; sometimes he used leeches, sometimes emetics. Expectation has also been advised, and chiefly by physicians. Such a practice may be justified in most of the cases which arise from an internal cause. But what surgeon would confine himself to simple expectation in an affection that would destroy three fourths of his patients. Uncctions protect the inflamed surface from the air, they lubricate the skin, make it pliant, permit its free extension, and thus prevent the kind of strangulation caused by the inflammatory fluxion; but they are only palliative. They cannot prevent the progress of erysipelas, and much less that of lymphitis, and never exert any considerable influence except in the simplest cases of erysipelas.

M. RICORD and some other practitioners have extolled mercurial ointment moderately employed. M. SERRES D'UZES thinks it should be carried as far as to cause salivation. M. BLANDIN has used mercurial frictions only in seven cases of traumatic erysipelas. Three of these patients died, of whom two were salivated, and the fatal termination was most probably thereby accelerated.

M. VELPEAU has advised compression upon the erysipelatous surface. This practice might be useful in the very incipency of the disease, if there existed certain precursory signs before the eruption, and the red lines. But the rapid propagation of the inflammation to the lymphatic glands, makes it almost impracticable. It is however, useful at the moment of the disappearance of the disease, when there is a tendency to œdema. Finally, cauterisation above the limits of the erysipelas has been proposed. This plan is powerless in arresting the cutaneous inflammation, and how then can we conceive it to have the power of arresting the lymphatic inflammation.

**M. BLANDIN's Treatment.** If the lymphitis be the pre-existing and predominating affection : if after its destruction only a simple phlegmasia of the integuments remains, it follows that the former of these affections should be first attacked, and as the disease is propagated to the lymphatic glands, it is here that we should first act. This mode of treatment is the more easy, as each gland is a point which serves to arrest the course of the inflammation, as well as that of the lymph, and we should profit by the sojourn of the fluid in this point, to attack it by leeches in order that it may be freed from all irritation when it resumes its course towards the visceral glands. If on the contrary, we apply the leeches to the erysipelatous surface, we debilitate the patient uselessly ; this is demonstrated by practice as well as by theory. M. BLANDIN has employed his method two years, and has scarcely lost a patient ; he has treated more than sixty cases during an erysipelatous epidemic, without losing a single case. He believes that this plan, though less imperiously demanded, is also useful in erysipelas, which arises from internal causes. It is also serviceable in erysipelas, both of the extremities and of the trunk, but more in the former than in the latter case. Because the glands of the extremities are more simple, more sparsely situated, while lymphitis of the trunk may affect at once the inguinal and the axillary glands, and those of the intercostal spaces. The employment of leeches is here more difficult. That this therapeutic may succeed, it must be instituted before the inflammation has passed higher than the superior glands of the extremity as those of the groin or axilla, for how can we act upon those of the viscera. It must be confessed that this method is much less efficacious in those cases which depend both upon an internal and an external cause, for here the miasm acts necessarily, and we know of nothing by which it may be opposed. But even here leeches applied over the lymphatic glands constitute the most rational remedy.—*Journal des Connaissances Med. Chir.*

PART III.  
MONTHLY PERISCOPE.

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*Indigo.*

This article, hitherto of interest only in the arts, has become a subject of investigation in a therapeutic point of view. To this end it has been subjected to physiological and therapeutical experiment, and to chemical analysis. It is pleasing to see a course of investigation in progress, bringing to view a portion of the fundamental elements on which a rational practice must be based, or from which it must be deduced. We give below, a brief notice of the chemical analysis, shewing the elementary principles this substance contains, its operation on the different functionaries of the human body, and its influence in a curative point of view in cases of epilepsy, chorea, &c. We have often heard of its utility in croup, pertussis, and other coughs; but the only scientific experience with which we have met, is of its use in epilepsy, and a few other spasmodic diseases.

M. DUMAS presented to the institute a memoir, in which he states that he has repeated the analysis of Indigo, and has obtained exactly the same results as those obtained by him five years since:—

Carbon	73.0
Hydrogen	4.0
Azote	10.8
Oxygen	12.2"

*American Journal Pharmacy.—Jour. de Phár.*

*Physiological Operation of Indigo.* In almost all patients, the use of indigo is succeeded first by squeamishness and vomiting, though the substance itself be tasteless and inodorous. The violence of the emetic efforts appear to be regulated by the individual irritability of the gastric nerves of the patients. Females vomit more readily than males. The vomiting is at first continuous, that is, during the continued use of the agent, and often so violent that the indigo must be given up; but after several days it ceases. It has otherwise the peculiarity that the



contraction of the abdominal muscles and the diaphragm is much less violent, and the debility is less considerable than after vomiting induced by other means. The contents of the stomach present nothing unusual, even in respect to taste, only they are of a very dark blue color, and the fluid is intimately mixed with the indigo, from which it may be inferred that the gastric juice contributes very much to the digestion of the indigo.

Diarrhœa, the second physiological effect of indigo, takes place in general first when the vomiting ceases; yet from this many patients remain altogether exempt. In general, diarrhœa, when once commenced, continues as long as the patients take the indigo, and increases in intensity during the continued use of the remedy. The motions are generally soft, semifluid, and of a dark blue-black color. The vomiting and diarrhœa are frequently accompanied with slight colicky pains in the stomach and bowels, which, however, may be so violent as to require the indigo to be given up. Those patients who are exempt from vomiting, appear to be attacked with more violent colicky symptoms. By the continued diarrhœa there is formed a species of gastrosis (irritation of the mucous membrane of the stomach and bowels,) with a loss of appetite, headache, and giddiness, and sometimes the sense of dazzling lights in the eyes.

The third physiological operation of indigo is seen in the urinary secretion. The urine assumes a dark violet color, deepest in the morning. On the quantity of the urine, the agent seems to exercise no influence.

Dr. ROTH did not observe colouration of the sweat. But it is remarkable, that one patient, after the use of indigo for several weeks, fell often into slight convulsions, similar to those which ensue on the employment of the nitrate of strychnia.—*Amer. Jour. Pharm.—Edinburg Med. and Surg. Jour.*, from *Neue Wissenschaftliche Annalen*.

*Therapeutic Applications of Indigo.* This substance was first employed as a therapeutic agent in the treatment of epilepsy, by LENHOSSEK, and afterwards by GROSSHEIM and others. Its efficacy was afterwards tried by IDELER, a Prussian physician; and among twenty-six patients, in whom indigo was experimentally tried, six individuals recovered completely; three were dismissed cured, who had after intervals of from eight to twelve months a relapse, under the operation of causes which might have induced epilepsy; of eleven patients, the condition underwent an essential improvement; and in six individuals no change took place. At first, the patients were wont frequently, though without effect, to vomit; after some days this ceased, and in its place diarrhœa occurred, which at first caused

from six to eight motions daily, and was occasionally accompanied with moderate colicky pain, but afterwards moved the bowels only two or three times daily, but with fluid motions, and continued so long as the indigo was used, but without impairing the appetite or digestion. The curative reaction of the nervous system upon the agent was principally indicated by this circumstance, that the epileptic symptoms in the first period returned more frequently, and attained a higher degree of intensity, but afterwards became less frequent, milder, and at length entirely disappeared.

Most usually the indigo was exhibited in the form of electuary, with a proportion of the aromatic powder, because, alone, it is very disagreeable to the patient. At first it was administered in the dose of one scruple; this was quickly increased to a drachm and more, so that daily from half an ounce to one ounce might be used for a series of months without difficulty.

In a paper in GRAEFE and WALTHER'S Journal, entitled Contributions to Casuistics, by D. MORITZ STRAHL, of Berlin, are some observations on the operation of the same remedy in spasmodic diseases. In the trials made by Dr. STRAHL with this agent, in ten cases of inveterate epilepsy, in which it was given in progressively increasing doses, of from one scruple three times a day, to half an ounce daily for the space of ten weeks, it produced not the smallest effect. During its employment the stools became blue, and the urine assumed a dark green colour. Excepting slight inconvenience of the stomach, no operation of the remedy upon the organism could in general be observed. On the other hand, indigo, in four hysterical females, one of whom was already in the age of decrepitude, evinced the presence of very remarkable phenomena. In all, after about two drachms daily had been taken, violent pain in the region of the kidneys, like colic, took place; the urine assumed a deeper intensity of colouring than in male patients, and at the bottom of the vessel was observed no trifling quantity of fine indigo powder. The intense renal pain continued for four days, and at length subsided under the continued employment of an oily emulsion. In one case only did there ensue a remission of the spasms, and the patient was not entirely well three months after the cure was completed. The operation of the indigo, further, on the womb, was very remarkable, since, in two cases, an amenorrhœa was radically cured, while the spasms were throughout undiminished. In two cases of St. Vitus's dance, in a boy of twelve and a girl of nine years, the indigo was throughout unavailing.

The different clinical trials made with indigo by Dr. ROTH, furnished the following results. In epileptic cases, the remedy evinces almost always the same immediate operation; but its

subsequent consequences are regulated by the degree of vitality of the nervous system of the patients, and the kind and duration of the epilepsy. These effects are beneficial in all idiopathic epilepsies, curative in those of this class which have not been of long continuance; and in very chronic idiopathic epilepsies, only a few are alleviated by the use of indigo, none are cured.—*Amer. Jour. Pharm.—Edinburg Med. and Surg. Jour. from Neue Wissenschaftliche Annalen.*

It will be seen by the above that, thus far there is only an *approximation towards* the elements of rational prescription of Indigo as a remedial power. For, however conclusive these investigations may be, and for aught we know, or suppose, the chemical analysis may be perfectly correct and conclusive; and the physiological actions, (so to call its operation on the stomach, intestines, kidneys and skin,) all the phenomena of its physical powers on the system; still, all these are, as we before said, but a small part of the elements of rational prescription. Indeed, successful practice may be had by only a knowledge of the medicinal powers of a remedy, without knowing how the chemist prepares it, or what are its constituents when prepared. (e. g.) Calomel, known by its power of purging, promoting secretions, salivating, &c. may be used as a simple, untested article, as cinchona, ipicacuanha, &c. before they were subjected to analysis, with as good effect ordinarily, as with a perfect knowledge of all its chemical nature, &c. Yet these items of knowledge are necessary to the scientific practitioner, both for the known power of the constituents, or the neutralization of these powers, and for avoiding the impairing effects of incompatibles given simultaneously, or found in the system, &c.\* Whilst therefore, these have their importance, still the indispensable elements of rational prescription lie in the philosophy of the disease—the true pathology of the case to be subjected to prescription. Hence the importance of pathological anatomy. But in the prosecution of this study, great care and good unbiased judgment are necessary to discriminate between morbid phenomena which

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\* As lime water for example, an article whose affinity for the muriatic acid is greater than that of the mercury, the consequence of which would be the decomposition of the calomel and the formation of the muriate of lime, whilst the oxyde of mercury is left—a power materially different from calomel. So likewise, the carbonate of ammonia is found to decompose this muriate of mercury, and form muriate of ammonia, leaving again the oxyde of mercury, and so on.



are merely the effects of disease in its approximation to fatal termination, and those which are causes ; the want of which dissemination has been of late, an error but too general.

Here then is a field of enquiry which we desire to see occupy the minds of medical philosophers. The inquiries are, what is the intrinsic nature of those spasmodic diseases for which indigo is desired to be found a remedy? What predisposition? What exciting, what perpetuating causes? Where seated? What functions are disordered, and in what do they differ from the healthy? What is the tendency of the pathological state? Does it tend to, and will it, with the powers of nature *alone*, return to health, and that as quickly and easily as with the assistance of science, and may therefore be entrusted to the *médicine expectante*? Or does it tend to idiocy, or other permanent impairment of the functions, or to death, and therefore imperiously demanding the aid of science? These are inquiries of paramount importance, and which must be answered before a radical treatment can be determined. We must know what *causes* are to be removed—the *mode of operation* of these causes—the extent of their effects. We must know the *general* physiological state of the system, as well as the physical powers of the medicinal agents, their *adaptation* to the removal of these certain causes—to the correcting of their remaining effects—the means for combining, or avoiding, (as need may be,) modifying influences, &c. &c. In short, the *pathological*, as well as physiological, chemical and therapeutic elements must all be known and duly appreciated in deducing, what many practitioners think a very little matter, *à prescription*.

It will be observed that the therapeutic researches herein noticed, seem to have partially determined one important point—the inutility of this article in other than idiopathic cases, or at most its only alleviating temporarily, some of those which are symptomatic, or attended with organic lesions. But here we are arrested by the want of pathology, for who can say that there are any such cases as epilepsy, chorea, &c. truly idiopathic—who say that they exert only as phenomena of organic lesions. Indigo may not therefore be expected to be used to greater or more uniform advantage than many other remedies which have had their day of praise and fallen into disuse ; until

the pathological elements of the spasmodic diseases, particularly epilepsy, to which the medical mind seems to direct this prescription, is more successfully studied.

We should be pleased to see a generous premium offered for (not the *best*, but) an essay which should set forth the rational philosophy of this, too often, uncontrollable and mischievous disease.

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Dr. COOPER'S *Observations on Chronic Bronchitis*.

We insert the following observations which are going the rounds of the newspapers, not with approbation of the manner in which Dr. C. has thought proper to allow his observations to come before the public; for such a plan is more calculated to do harm than good, by throwing into the hands of the public a valuable power to be ill-judged of, or rather, to be indiscriminately used, without any judgment at all. Nor have we arrested it in its flight in company with the nostrums and catholicons in the gazette curricula, on account of our estimate of value we place on the observations on consumption which fill up the first two paragraphs; but because "the course of treatment is evidently one which ought only to be adopted and pursued under the direction of a skilful medical adviser;" and because we know that the remedial power which is the leading article in the prescription is calculated, under such circumstances to deserve a better fate than consignment to popular and indiscriminate use. It will be recollected by the profession that the leading power in this treatment, the good success of which Dr. COOPER has said so much about, is also the leading article in the pill of Dr. SENTER,\* which at one time possessed great celebrity as a dry vomit

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\* The following is the formula for making Dr. SENTER'S dry-vomit pill —

R. Sulphate of copper

Ipicacuanha, each 7 to 10 grs.

Make into a pill to be taken into the stomach in the morning fasting, without drinking any thing after, until the operation is free. He also used a solution of 3 to 12 grains in 2 or 3 ounces of water. What has been called SENTER'S emetic, is the following:—

Rf Sulph. cupr.

gr. vi

Pulv. ipicac. rad. grs. x., vel xv. M.

Dr. MARRYATT was probably the first individual who made extensive use of this

in the treatment of pulmonary affections. It is also a kindred power to the "emetic mixture," or "vitriolic solution" of mosely,\* which is given in nauseating doses, or as a dry vomit; both of which we have occasionally used with decided success.

"The late lamented death of Dr. BUSHE from that form of consumption known as chronic bronchitis, painfully reminds the subscriber of a duty he owes to his profession and to society, of making known a simple form of treatment that has never failed him in curing this form of consumption, so destructive to the clerical and literary professions. This treatment is of nearly equal efficacy in catarrhal phthisis, and is a valuable remedy for consumption in all its forms when in its chronic stages, and free from any inflammatory symptoms. It is based on the pathology of consumption as the generic name for the disease.

Under the name of consumption are included that variety of diseases of the lungs attended with expectoration of purulent matter from the breathing surface of the lungs, connected with emaciation, hectic fever, and its concomitants, night sweats, colliquative diarrhœa, &c. All the powers of consumption act on the general health from one common cause—the presence of matter acting upon absorbing surfaces, and thus producing those symptoms known as *hectic fever*. It is the presence and violence of this symptom of consumption that prostrates the patient, until it more or less slowly ends in death. It is the consequence of hectic fever, and not the immediate disease of the lungs, causing it that forms the source of fatality from consumption.

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article as an emetic, and a nauseant in phthisis. He advised it combined with tartarised antimony as follows:—

R. Sulph. of copper

Tartarised antimony, each grs. viij.

Rub well together and divide into 3 equal papers, one of which he gave every 2 or 3 days. The pill is, for several reasons, the most eligible form.

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\* Dr. MOSELEY's emetic mixture, or vitriolic solution is made as follows:—and is also treated as a dry vomit when given as an emetic.

Rf Sulph. zinc. 3iij.

———— alumin. 3i.

Pulv. cocc. cac. gr. iv.

aq. bullient. ʒviij. M. Dose ʒfs every

hour to vomit, or every 3 hours to nauseate.



The treatment I now with reluctant diffidence submit, I have used successfully, and for more than twelve years; and during that period of medical practice, I am not aware of having lost more than four or five patients from all the various forms of consumption; and these were mostly passed to that stage of disease where the structure of the lungs had become so extensively diseased as to preclude the use of more than palliative treatment. Cases of chronic bronchitis were, in every instance, cured by it, even when the purulent expectoration amounted to pints daily, with hectic fever, diarrhœa, cold sweats, and intense physical prostration.

The treatment is the administration of sulphate of copper in nauseating doses combined with gum ammoniac, given so as to nauseate, but not ordinarily to produce full vomiting. The usual dose for this purpose is about half a grain, and five grains of the respective ingredients, in a teaspoonful of water, to be taken at first twice, and in the convalescent stages, once a day.

In cases of chronic bronchitis, a gargle of the sulphate of copper alone is superadded. In this latter form of consumption, this treatment almost invariably suspends the hectic symptoms in a few days, and the disease rapidly advances to its final cure.

In cases of the more proper forms of consumption, the treatment must be intermitted frequently, and again returned to; and whenever soreness of the chest, or other symptoms of inflammatory action exist, the treatment must be suspended; as it is in the chronic state alone that the remedy is indicated or useful—that state in which the condition of the general system, as sympathetically involved, becomes the more prominent symptom; and the success of the treatment depends chiefly on the breaking up of the sympathetic action of the diseased lung, on the more healthy tone of the stomach, increasing the digestive powers, and likewise causing, during nauseating action, a more active and healthy circulation through the lungs. Its curative powers are more immediately attributable to these effects of its action. But theory apart, the treatment prescribed is based on more than ten years experience of its curative advantages, in the proper treatment of muco-purulent, and purulent expectoration.

Having left a profession that more nearly than any other approaches the pure duties of humanity; but which has nearly ceased in this country to be honorable or profitable, I have little motive in exposing myself to that certain ridicule that follows the annunciation that consumption may be cured, but the assurance of practical experience, and the desire of making public, the means of saving life in one of its most frequent and unwelcome exits.

EDWARD C. COOPER.

*Resolutive Effects of Carburet of Sulphur upon indolent Tumours.*

LAMPADIUS in 1826 extolled the employment of this compound, for rheumatism, chronic gout, paralysis, cutaneous eruptions and burns. Since this period, this liquid has been frequently made use of in the north of Europe. Dr. KRIMER has employed it anew with happy results in divers affections, and principally in the treatment of indolent tumours which had resisted all kinds of medications. Under this plan of treatment he has administered internally 16 grains of animal charcoal, mixed with the extract of cicuta; whilst externally he has caused to fall from a certain height upon the tumour, from 40 to 50 drops of carburet of sulphur, repeating it three times daily. The effected part was enveloped during the interval in wool or swan's down, and twice a week warm baths slightly alkalinized were directed. This method of employing the carburet of sulphur was completely successful in his hands. The external use of the same compound was equally successful with M. KRIMER in the case of a young lady who labored under goitre.

Finally, in several cases of *strangulated hernia*, the author found that no application so much facilitated reduction as the *carburet of sulphur*. Some drops applied to the hernial tumor, reduced it promptly without any manipulation.

M. OTTO, of Copenhagen, has also employed with success, in obstinate rheumatic and arthritic affections, the carburet of sulphur according to the following formula:—

Take of Carburetted sulphur,	ʒii.	
Spirit of wine,	ʒi.	M.

The patients are to take four drops every two hours, at the same time that frictions are made with the following liniment:—

Take of Carburet of sulphur,	ʒij.	
Olive oil,	ʒi.	M.

By these means a persistent rheumatic affection of the feet accompanied with swelling of the extremities and knees, was removed in a short time.—*Amer. Jour. Phar.*, from *Jour. de Pharmacie*.

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*Cantharidin Plaster.* CHARLES ELLIS\* & Co., druggists and chemists, No. 50, Chesnut street, Philadelphia, have prepared a new blistering plaster from cantharidin, or the active

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\* Secretary of the Philadelphia College of Pharmacy.

principle of Spanish flies. It is spread upon silk, or glazed cloth. Being ready prepared for use on silk cloth, it is said to be exceedingly convenient and easy of application, possessing the adhesive quality, as well as cleanly appearance of court-plaster—that it will excite a blister with equal certainty with the fly ointment, without the unpleasant consequence of a portion of it adhering to the blistered surface. It is also said to be free from the liability to cause strangury.

It is used by applying a piece of it, of proper size upon the skin, with sufficient pressure of the hand to make every part of it adhere closely to the surface. It must be allowed to remain in application the usual period of 10 or 12 hours, unless it should draw sufficiently in a shorter time.

For taking it off, a wet cloth or sponge is to be passed over the back of it, after which it may be removed without pain. The blister is then dressed in the usual manner.

In case of the plaster having become dry by age or exposure, a little sulphuric ether rubbed over the surface of the plaster, will cause it to act more speedily. In all instances of applying it, care should be taken to make the plaster stick closely to the skin. This article will be found particularly convenient for application in those cases of spinal irritation now so constantly observed, and to which it is very inconvenient to bind on the common blistering plaster with sufficient accuracy for its constant adjustment.

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*Glutin Capsules of Copaiva.* M. GUENEAU DE MUSSY read to the Royal Academy of Medicine the report of the committee appointed to investigate the merits of a new kind of copaiva capsules invented by M. RAQUIN, a pharmacist. The capsules were formed of a slight layer of pure gluten. The copaiva, before being made into pills, is incorporated with one twenty-fourth part of magnesia. The committee have seen them prepared, and tried them in many cases at the Venereal Hospital. They prefer them to the gelatine capsules of M. MOTHE, which have already acquired the approbation of the Academy. This preference is founded upon the following reasons:—The size of the copaiva pills enveloped in gluten may be varied, which is not the case with the gelatinous capsules. In a small volume, the glutinous contain more copaiva than the gelatinous capsules; and do not, like the latter, allow the copaiva



to exude. When immersed in fresh water, or in some odoriferous water, the odour is communicated to them, and they are also more easily swallowed. The capsules of gluten can be taken in larger doses than those of gelatine, and without the nauseous eructations which the latter cause when dissolved in the stomach. The small quantity of magnesia combined with the copaiva prevents this inconvenience, and facilitates the digestion.—*Archives Générale de Méd., July.*

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*Internal Strangulation of Intestine, taken for Puerperal Peritonitis.* One year after marriage, Madame N. was delivered without accident, of a child which she did not suckle. The 10th day the mammæ were not even swollen, but the lochial discharge existed. The 12th day she felt, suddenly in her right iliac fossa a severe pain—the next day she was pretty well. On the 14th, hiccough, vomiting, &c. The patient presented an umbilical hernia which was soft, and without pain. No tumour could be perceived in the abdominal rings. An active antiphlogistic treatment was commenced, but the patient died in eight days—the 20th after delivery. When the body was opened, the cæcum was found strangulated by the appendicula vermiformis which embraced the intestine. The uterus and peritoneum were in a normal state. “The error of diagnosis in this case,” says M. BAFFOS, “was unimportant, as the same treatment must have been indicated.—*Archives Général de Méd., July.*”

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*Urinary Calculi covered by a kind of gilding.* M. SÉGALOS presented to the Academy three calculi, one as large as a bean; the two others, smaller, which resembled gilt porcelain. The large one was found in the kidney of an ox; the other two, in the bladder of a cow. By scraping with the nail, the gilding was removed from one point, and the calculus found to be white; but when the same point was rubbed with the pulp of the finger, it was again covered by a gilt coat. A chemical examination was to be made, in order to ascertain the principle to which this gilt envelope is owing.—*Archives Général de Méd., July.*

We presume it would not take much of what Dr. JOHNSON calls “strong, hard, round-about common sense” applied as a test to these calculi to determine, that the “gilt envelope,” is no *envelope* at all, and is but the hue which is reflected by the polish which these calculi very easily receive. Let us see, when the chemical analysis is reported, what better will be determined thereby.

## OBITUARY.

It is with feelings of filial sorrow that we are under the necessity of announcing the death of the venerable FATHER OF AMERICAN SURGERY, DR. **PHILIP SYNG PHYSICK**.

There is no section of our happy land which is without those who mourn his loss. Thousands unite to praise his merits, reverence his memory, and ascribe to him the honor of our FATHER IN SURGERY.—But we are only his episodes; his higher praises are registered in the grateful hearts of tens of thousands who, during his long and useful life, have enjoyed the ameliorating influence of his superior surgical talents.

He was not of those who are driven up by the force of circumstances; but persevering zeal, and originality in many the most important respects were peculiarly his. Like his cotemporary DUPUYTREN, he justly possessed the credit of his own growth to fame and usefulness. When his hand was first applied, American Surgery had not even a name! Now, what is it! Behold a prolific tree which overspreads the whole land, and justly claims honors equal with the foremost! It was a plant, germinated at *his* feet, cultivated by *his* hand, guarded by *his* care, and nurtured, pruned and extended by *his* counsel.

But it is not our purpose to write an eulogy. With his own hand he has created an imperishable monument, and inscribed thereon, the unfading honor he has bestowed  
on his country, in giving dignity and  
true worth and usefulness to his  
profession.

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*Tribute to the Memory of Dr. PHYSICK.*

At a meeting of the Faculty and Students of the Medical College of Georgia, for manifesting their high respect for the late Dr. PHILIP SYNG PHYSICK, Dr. MILTON ANTONY was called to the Chair, and Dr. GEORGE M. NEWTON appointed Secretary.

On motion of Dr. PAUL F. EVE, the Chairman appointed Drs. PAUL F. EVE, ALEXANDER CUNNINGHAM, CHARLES DAVIS, GEORGE M. NEWTON, and WILLIAM L. ALFRIEND, a committee to draw up resolutions suitable for the occasion.

After a few moments the committee made through their chairman, Dr. P. F. EVE, the following report:—

The Faculty and Students of the Medical College of Georgia having heard, with the deepest regret, of the death of the venerable Dr. PHILIP SYNG PHYSICK, feel themselves called upon to give public expression of their sorrow at this afflicting dispensation of Divine Providence.

Truly has a great man fallen in our profession. One who had, by his zeal, talents, and arduous devotion to our science, secured the entire confidence of the American public; and whose teachings and signal improvements in surgery can never be forgotten by his numerous pupils in every state and territory of our country.

He was associated with RUSH, SHIPPEN, and WISTAR, in establishing the first medical school on this side of the Atlantic—himself a pupil of the celebrated JOHN HUNTER, and by his fame as a scientific and successful surgeon, he attracted patients from all parts of our Union.

If Dr. RUSH was the father of American medicine, Dr. PHYSICK is no less entitled to the appellation of THE FATHER OF AMERICAN SURGERY. Appreciating then the great loss which has been sustained in the death of our venerable Father, Dr. PHILIP SYNG PHYSICK, late of Philadelphia, be it therefore

*Resolved*:—That we deeply sympathize with the community at large, mingle our sorrow with our professional brethren throughout the United States, and offer our sincere condolence to his distressed family.

*Resolved*:—That as a tribute of respect for the worth and character of the deceased, we will wear the usual badge of mourning for the space of thirty days.

*Resolved*:—That we respectfully request that the next number of the Southern Medical and Surgical Journal be issued in mourning.

*Resolved*:—That the Secretary transmit a copy of the proceedings of this meeting, signed by himself and the Chairman, to the family of deceased; and to the editor of the Southern Medical and Surgical Journal, and the editors of each of our city papers.

On Motion of Dr. P. F. EVE, the report was unanimously adopted. On motion of Dr. DUGAS, the meeting adjourned.

MILTON ANTONY, *Chairman*.

GEORGE M. NEWTON, *Secretary*.



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## PART I. ORIGINAL COMMUNICATIONS.

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### ARTICLE I.

*Remarks on the Pathology and Treatment of Bilious Fever, read before the Medical Society of Augusta, by L. A. DUGAS, M. D., Professor of Anatomy in the Medical College of Georgia.*

There is perhaps no subject connected with the advancement of science, of more importance than nomenclature, for, on the correctness of names, depends, in a great measure, the correctness of our ideas relating to the facts they represent. A name should, as far as practicable, always convey a correct and distinct idea of the leading features or properties of the subject to which it is applied, and any deviation from this principle must tend to complicate the attainment of knowledge, by requiring of the student not only the recollection of unmeaning technicalities, but also the correction of their original interpretation. It were always better that a name convey no definition, than an incorrect one.

The inappropriateness of the appellative at the head of these remarks is striking. The term fever is now applied to a peculiar assemblage of symptoms, without reference to cause; yet, when qualified by the adjective "bilious," it is assigned to an extensive class of diseases prevalent in our section of country and in most warm climates. We should, from the above designation, expect to find this class of diseases always characterized by a derangement of the biliary secretion; such, however, is not invariably the fact, as I shall endeavor to establish in the sequel.

The system of localization, which has already accomplished so much in continental Europe, has been too much neglected in our country, and especially with regard to the diseases of this climate. Still adhering to the theories of the humoralists and of those who look upon fevers as specific affections of the entire system, the great mass of our practitioners are found to direct but little attention to the condition of individual organs.

When, fresh from the benches of the school of organic medicine, I was called on to examine and to treat cases of "bilious fever," I instinctively interrogated in succession every organ of the body, in search of the *seat* of the disease, or in other words, of the cause of so much constitutional disturbance. In some cases, despite of all my investigations, no trace of disordered function (the best evidence of a diseased organ) could be detected elsewhere than in the stomach; in others the bowels were alone distempered; other sets evinced the disturbance to be located in the liver, in the brain, or in more than one of the principal viscera. The *bilious* modification, implied by the *name* of the affection, though very frequently manifest, was often entirely wanting. Yet, each of these cases presented certain characters peculiar to all. Their onset was always marked by loss of muscular power, by pains in various parts of the muscular system of animal life, &c.; their early stage by intermittency or decided remissions; their duration and termination presented a strong analogy; in short, it was evident that, although modified by the affection of some special organ, all these cases were under the predominance of an original and common affection. The seat of this original and common affection cannot be mistaken if we adhere to the principle already alluded to, that of regarding vitiated function as the best indica-

tion of diseased organ. If an organ be healthy, its function must necessarily be normal; consequently, if a function be abnormal, the organ presiding over it cannot be in a physiological condition. I am aware that it will be urged that certain secretions may be vitiated by an altered condition of the fluid whence they are derived, without disease of the secreting organs. For example, the urine may present various aspects according to the substances taken into the circulation; or, the composition of the bile may depend on that of the blood. But this cannot affect our position, for, the condition of the blood itself, depends entirely on that of the organs which form it, and of those whose office it is to eliminate its impurities. If it remain impure, the cause must be found in the vitiated action of the excretories.

But, whether these principles of diagnosis be admitted or not, it is presumed that no one would, on reflection, refer the morbid condition of the contractility and sensibility of the muscular system, to any other locality than the nervous centres. We have already stated the earliest symptoms of our fevers to be lassitude, loss of muscular power, and pains in the muscles of animal life; also, that intermittency, more or less complete, always marks their early stage. We are, therefore, led to the conclusion that the nervous system is the *original and common seat* of this class of affections. I trust I will not be misunderstood; the term *original* being here used expressly to indicate that these fevers *subsequently* undergo serious modifications, from the superposition of other derangements. It is to these complications we must look for the explanation of the various forms assumed by the fevers misnamed "*bilious*," so that the proper definition of them should be *an original affection of the nervous centres, subsequently complicated by phlogosis of some other organ or organs, which secondary disorder may either gain the ascendancy of the primary, or merely mask and modify it.*

Let us now examine some of these complications; and in doing so, it is scarcely necessary to premise, that, in point of frequency, they vary exceedingly in different seasons and in different years. The most simple may be classed under the head of hepatic, gastric, enteritic, cerebral and pulmonic; the more complex forms are those in which there are more organs than one, implicated secondarily.



The *Hepatic complication* will, in addition to the general symptoms, already mentioned as common to all the forms of this class of fevers, present the characteristics of hepatitis, more or less acute ; and this is, perhaps, the most obscure form of these fevers, inasmuch as the indications of hepatic disorders are less marked and less understood than those of any other of the viscera. In the present state of our knowledge, an hepatic affection can only be inferred either from an increase or diminution of bile, from the volume of the liver (which may be determined by percussion) or from the mere absence of disease in any other organ, sufficient to account for the general disturbance of the circulation. Pain in the region of the liver, though occasionally pointing to the seat of the disease, can only occur when the peritoneal investment is affected (the liver itself being insensible), and is too inconstant to be relied on. The quantity of bile can only be estimated by the appearance of the matters ejected from the alimentary canal, and by the colour of the eyes and general surface. To admit, on any other grounds, the existence of disease in the liver, would be proceeding beyond the limits warranted by our actual knowledge of the pathology of this important gland. If there be an increased secretion of bile, it will be found proportionably thrown from the stomach and passed off with the alvine evacuations. The yellow hue of the eyes and skin may accompany this state, as well as that in which the evacuations evince a decided paucity of bile ; hence, this cutaneous change indicates the mere fact, that the colouring matter of the bile has passed into the blood, without pointing out the cause of this occurrence. It is well known now, that jaundice often results from duodenitis, without any affection whatever of the liver itself.— If these circumstances be borne in mind in the investigation of these fevers, it will be found that a large number of cases will present no trace of hepatic derangement.

The *Gastric complication* is characterized by the well known symptoms of acute affection of the stomach : viz. loathing of food, nausea and vomiting. The pulse in this is never so much developed nor so resisting as in the hepatic complication, and yields more readily to venesection, which not unfrequently occasions syncope. The countenance is also more anxious and the face less flushed. Pain, on pressure of the epigastrium,

though of late much insisted on as peculiar to gastric irritation, would, perhaps, more properly be regarded as indicating disease of the subjacent peritoneum, whether lining this region, or reflected over the stomach or the depending edge of the liver.— This membrane is known to be highly sensitive when in a state of irritation or inflammation, whereas we may yet doubt that this is the case with regard to the other coats of the stomach.— The inflammation of the peritoneum in this region alone, however, might be produced by an extension of disease from the other coats of the stomach or from the parenchyma of the liver, and should, therefore, always be considered in connection with the state of these organs. That the tenderness of the epigastrium is occasioned by the condition of the serous membrane, may, independently of the above considerations, be inferred from the readiness with which relief is afforded by revulsive applications to the cutaneous surface, whilst the other symptoms remain unmitigated.

The *Enteritic complication* is that in which the bowels are most obviously in a state of phlogosis. The mucous surface of the intestines pours out an immense quantity of thin muco-serous fluid, which, either passes off spontaneously, or is expelled by the action of cathartics. It will be marked by copious diarrhœa; or by the fact that the slightest laxative will be attended with excessive purgation, which, instead of subsiding with the effect of the remedy, as usual, will continue indefinitely. The small are much more frequently affected than the large intestines, and, consequently, diarrhœa is more common than dysentery. Pressure over the abdomen will be occasionally attended by pain, probably arising from the extension of the disease to the peritoneal investment, as already explained with regard to the stomach and liver.

The peculiar torpor, or obstinate constipation of the bowels, so often observed in our fevers, is considered by some as indicating a degree of inflammation so high as to arrest the secretions of the mucous surface, whereas others regard this condition as induced by a want of the accustomed stimulus of the bile. Both of these explanations appear to me exceedingly objectionable; the former, because I cannot admit so high a degree of excitement simultaneously invading the *entire* length of the canal;

and also because all post-mortem inspections testify that in cases of death during the existence of diarrhœa or dysentery, the mucous surface may be found presenting every grade of disease from mere irritation even to destructive ulceration. Inflammation of the mucous membrane cannot then account for obstinate costiveness, nor do I think these two states can exist together.

To admit that such a state of torpor can result from the want of biliary stimulation, would be to concede that the hepatic secretion is more irritating than the most drastic cathartics in *materia medica*, for, we frequently find it resisting them, not only individually, but in the most potent forms of combination.—Again: the passage of white or clay colored fœces occasionally observed in jaundice, at the same time that it proves indubitably the absence of bile in the alimentary canal, also establishes the fact that such absence does not cause obstinate constipation. I would look to the intestinal muscles, and through them, to the nerves which control their action, for the explication of the phenomenon. The peristaltic motion is arrested because the muscles do not act, and these are torpid, because of some derangement of innervation. This lesion of innervation may be traced either to the concentration of irritability in some organ seriously implicated, (the liver for example) as is most frequently the case, or it may be found to depend on the peculiar condition, probably congestion, of the nervous centre. The correctness of these views is most strikingly illustrated by the efficacy of the treatment of obstinate constipation, in the one case by copious bleeding, and in the second by revulsives to the spine. In the great majority of instances, a few cups or a blister to the spine will enable laxatives to act when the most active drastics have previously failed.

The *Cerebral complication* is one that occurs alone, much more rarely than those already described. It is always, however, recognized by a predominance of encephalic disturbance, as head ache, intolerance of light, tinitis aurium, delirium, wakefulness, and sometimes subsultus tendinum and coma. The symptoms developed in this form of the disease, and which indicate phrenitis, should not be confounded with the slight manifestations presented in most cases of bilious fever. Head-ache, for example, will be found in the great majority of instances, but may, in



many of them, be referred to some kind of sympathy implicating the nerves of the scalp which frequently becomes very sensitive to the touch, and in which the pain is certainly then located.

The *Pulmonic complication* is still more rare than the last mentioned. Here the respiratory apparatus will be found more or less distempered; pneumonia may sometimes be detected, but the mucous membrane of the bronchi is the most common seat of disease. Respiration will be more or less impeded; expectoration at first slight, but subsequently copious, and occasionally some soreness about the chest; coryza not unfrequently exists.—This form usually occurs either in the spring, or very late in the season of our fevers, and is seldom fatal.

I have thus far described the mildest forms of our fevers; the *simple* complications of the original type. But there are *double* and *treble* complications, in which two, three, or more organs are simultaneously or consecutively diseased. If the diagnosis of the simple complications be well understood, that of the more numerous will be equally so, and consequently needs not be now dwelt upon. Indeed any considerations on these would lead us far beyond the limits assigned to this paper, for, the five forms enumerated, might, by various combinations, be carried to an immense number. The gastro-hepatic, gastro-enteritic, and gastro-entero-hepatic are by far the most common of the plural complications we encounter.

Let us now turn our attention to the treatment of these affections—We have already stated that neither of the above complicating phlegmasiæ, alone or *unattended with spinal disease*, could produce the phenomena common to all the forms of our “bilious fevers,” and we have furthermore stated the primary lesion to be that of the nervous centre, or, in other words, of the spinal cord. If this primary affection remain uncomplicated, then we have a disease of the mildest form known; one which retains its peculiar characteristics, its paroxysmal form and its periodicity. In short, we have a plain case of ague and fever, such as we daily see. With these views of the pathology of our autumnal fevers, the treatment must necessarily be divided into that proper in the first or uncomplicated stage, and that required by the subsequent modifications, for, if the first stage be promptly and energetically met, the progress of the disease may be arrested.—

So long as the nervous system is alone affected, our medication should be entirely directed to it, and such remedies used as are known to possess the most decided anti-periodical properties.—Quinine, our most potent anti-periodical, should be given with a liberal hand during the very first intermission, and persisted in until the disease be vanquished, or its administration be prohibited by the supervention of settled phlogosis of some organ, which fact will always be indicated by the *continued* form then assumed by the disease. It is as impossible that a complete intermission should occur during the existence of inflammation in an important organ, as it is that the said inflammation should alternately invade and disappear suddenly from a tissue, without leaving any vestige of its existence, until the recurrence of another paroxysm. Inflammations are always more or less permanent; they have their periods of progress, maturity and declension well marked, and cannot suddenly disappear and reappear with intermissions of perfect health, as do our intermittent fevers.

The action of quinine will always be most happily seconded by revulsive applications to the spine, which is frequently found painful on pressure or percussion. Indeed these will, alone, in many instances, be found sufficient to arrest the disease. For evidence of their very decided effect, I would refer to the interesting and able paper published by Professor FORD, in the sixth No. of the Southern Medical and Surgical Journal.

But, although the treatment of our fevers at their onset, be of the utmost importance, the services of the physician are rarely requested before the localization of irritation in some organ of more or less importance. He is then called on to treat a disease much more unmanageable. Inflammation has supervened, and the whole antiphlogistic battery must be put in requisition. In so doing, however, too much care cannot be directed to the selection of agents. It is not a mere abstraction, inflammation, we have to combat; but inflammation of special organs; and it is the neglect of this consideration which accounts for the wretched routine practice inculcated in many works and followed out by the people at large. It is this neglect that causes irritating emetics to be given in the gastric form of the disease, drastics in the enteritic, and calomel in the hepatic, whether attended with increase or diminution of bile.

The general action of the circulation must be reduced; but it must be brought down by those remedies best calculated to abate the local inflammation which keeps it up. Early and free depletion from the arm, from the spine, and from the vicinity of the affected organ, will be proper in all cases; emetics in all, save the gastric; and cathartics in all, save the enteritic. Emetics are most signally beneficial in the early stages of the hepatic and enteritic complications, not only by emptying the stomach, but also by their revulsive operation, and by the general relaxation and diaphoresis they induce. In the enteritic form, antimonial emetics should be avoided, from their strong tendency to act on the bowels, and preference given to ipecac or lobelia.

Of cathartics I cannot speak too highly in all those forms unattended with enteritis. They, not only evacuate the contents of the intestinal tube, but also establish from this extensive surface an abundant drain, both depletory and revulsive. They unite all the advantages of local depletion and of the most powerful revulsives, a combination of results not to be obtained by any other medication. If energetically and repeatedly used, they may advantageously supersede the lancet, whose effect is merely depletory, whenever the intensity of the disease is not such as to demand a more sudden reduction of the circulation. In such cases their advantage will be explained by the fact that, if revulsion be added to depletion, the extent of the latter need not be carried so far, and, consequently, the resources of the system will be less impaired and convalescence rendered more speedy. Let the *modus operandi* of cathartics be properly understood, and their high value will be justly appreciated. They excite to increased action and increased secretion the vessels of a great surface, situated in the proximity of and connected by vascular communication with the organs most frequently phlogosed; the liver and stomach. Their derivative and depletory effects must, therefore, necessarily be immediately felt by the diseased organs; the morbid concentration of the fluids will be diverted from viscera, unable, from over-excitement, to relieve themselves, and directed to a surface prepared to throw off any superfluous accumulation. Venesection is often necessary in our fevers, but it can never be carried sufficiently far to completely subdue excitement, without seriously endangering the



recuperative powers of the system. Hence the vast superiority of cathartic depletion in many cases, and their positive necessity in the great majority.

In alluding to the treatment of "bilious fever," it would seem unpardonable to take no notice of a remedy thought indispensable by the great majority of our practitioners; a remedy which, according to them, possesses the wonderful property of adapting itself to almost every condition of the system and form of disease; of altering and regulating action, whether increased or diminished, of correcting the secretions, of exciting the absorbents, of equalizing the circulation, and, in short, of rectifying the fluids and renovating the solids. An agent of such multifarious virtues should certainly not pass unnoticed, in considering the treatment of any malady, and, especially, of that of which it is so generally regarded as the antidote. The limits of this paper, however, already extended beyond my original design, will permit but a brief allusion to calomel. I am, moreover, disposed to be brief, because I rarely use this agent in the class of diseases under consideration. If the excitement be great, I prefer more active depletory and revulsive means, and, when it is reduced, I still resort to antiphlogistics of a milder and less objectionable kind, confident that the secretions will be restored and the circulation equalized, without calomel, whenever the organs are restored to their normal condition. If *experience* be appealed to, I will fearlessly challenge a parallel of my success, with that of the most strenuous advocate of the mercurial medication, and endeavor to prove that "bilious fever" may, in general, be more readily and more safely cured without, than with calomel.

The above remarks, hastily thrown together, in reply to a question proposed for discussion by the Medical Society, are necessarily devoid of those references and acknowledgments usually required in an elaborate treatise. They contain the simple expression of my views on the subject of debate, and are not intended to convey any further claim to originality than may be awarded them by those familiar with the literature of our profession.

P. S.—Having reason to believe that my remarks on the use of calomel, in the above article, have been misunderstood by some

of those present at the meeting of the society, I will be more explicit. I have stated that "I *rarely* use this agent in the class of diseases under consideration," and not that I *never* use it. Nor is my objection to it founded on the belief that it is an irritating or drastic remedy. So far am I from entertaining this opinion, that I give it the decided preference in such cases as are attended with a disposition to enteritis, and whenever I wish merely to evacuate the bowels, without incurring the risk of occasioning debilitating purgation. Hence it is peculiarly adapted to the last stage of our fevers, and not to the early, when active depletion is requisite. In the last or convalescing stage of the hepatic form of the disease, when excitement has been fully subdued, it may also have some tendency to relieve the liver by exciting it to secretion, but whether this be done by a specific action or merely by revulsion on the contiguous duodenal surface, is yet a matter of doubt with me. My principal objections to its general use are, in the early stages, its want of energy, and in the latter, its strong tendency to produce salivation with its frightful consequences. None but those familiar with the practice in our southern and south-western states can form any idea of the havoc of this useful but much abused remedy. It is scarcely credible, yet I have ascertained the fact by special inquiry of our druggists, that there are annually vended in this small city no less than one thousand pounds of calomel, besides a proportionate quantity of blue pill mass, mercurial ointment, corrosive sublimate, &c. !—Is it then surprising that the steamers, the vegetable quacks and nostrums of all kinds should find countenance by those whose loss of teeth and shattered constitutions have warned them against the abuse of mercury !

## ARTICLE II.

*Case of Fistula cured by Coffee.* By M. ANTONY, M. D.

J. S. C., aged about 40, of medium stature, black hair and eyes, round make and active in body and mind, between 3 and 4 years ago became afflicted with hæmorrhoidal tumours. The swellings were soon very painful, and were chiefly within the sphincter ani; soon however, tumours arose as usual around the verge of the anus. The swellings were never as large as they are in many cases, but were so painful that on the failure of other ordinary applications, he was compelled to resort to warm bathing of the part almost incessantly for keeping the extreme pain in moderation for the present. The symptoms, after being palliated for a while, readily returned on taking cold, or on any cause of the slightest morbid excitement. After a few months, an aching induration was observed, extending, along the cellular substance on the right side of the anus in the direction of the ischiatic tuberosity, to the extent of about one inch; at the outward extremity of which there appeared in the superficial integuments a little pimple, which finally opened and discharged a small quantity of matter. Soon after this, the subcutaneous induration on that side of the anus shrunk away until it appeared like a small cord about the size of one's little finger, and the hæmorrhoidal tumefactions all around the anus disappeared, except one small point on the left margin. This remained, subject to some swelling and tenderness on any unusual excitement, but ordinarily free from pain or peculiar sensibility; only exhibiting the appearance of a small shot under the integuments of the part. Meanwhile however, the little opening on the right continued steadily to yield a small discharge, not exceeding probably, half a tea-spoonful a day. The opening was so minute as barely to admit the end of a common probe.—This was however, used in the examination, and an incomplete fistula found, which was about one inch in depth.

After inspection by a physician, it was operated on, so as to divide the septum between the sinus and the anus. After this



operation, the incision was regularly dressed by the interposition of lint, &c. It soon healed, leaving a superficial ridge in the direction of the sinus, and a considerable tumefaction within.—After a few weeks the sinus again opened at the outward end of the incision. This opening continued to discharge about as it did before the operation.

Mr. C. was as before stated, a very active man in business, often riding on horseback, and often walking much: All these habits have continued regularly to the present time. About three months ago he took boarding at the private boarding house of a relative, where he was served every night at 9 or 10 o'clock with a cup of coffee—about three gills in quantity. Mr. C. had been habitually a tea drinker at breakfast and supper. Thus continued the fistulous opening until three weeks since, when, having remarked that he felt no inconvenience, and that his cloathes had ceased to indicate any discharge from it, he then examined, and found that the fistulous opening had healed, and the eschar in the direction of the cut, shrunk below a level with the external integuments, whilst the cord within had entirely disappeared.

The coffee used by Mr. C. was a cheap West India, and was kept standing in a tin coffee-pot from supper until 9 o'clock at night.

Notwithstanding this is a solitary case of the kind, there is much reason to believe that it stands as a demonstration of the curative power of coffee in such a case.

And whilst it is admitted that the recovery, and the use of the coffee, an unusual article of diet with this individual, may have been a mere conjunction of circumstances, or a coincidence, having none of the relation of cause and effect, still, observations on the use both of tea, which this patient had habitually used, and coffee, which was accidentally adopted, tend to encourage the idea that the use of the coffee was the cause of recovery from the fistula.

Almost every mother has observed the different influences of tea and of coffee on the function of lactation; and mothers abounding in excess of this secretion have found that the liberal use of coffee has not only failed to produce, like tea, an increase, but on the other hand has with great uniformity tended to les-

sen the quantity. So well observed has this fact been, that nursing women wishing to dry or to lessen their lactation have learned to adopt the use of coffee as a diet; and on the contrary to live liberally on tea when they desire an increase. The fact of the influences of different articles of diet on this function, none will be disposed to controvert. If this be a fact, why may not this opinion among the people, founded on the observation of facts, relative to the use of tea and coffee be correct also? If this opinion be founded in fact relative to the use of coffee in general, it is by no means less probable, if not more so, that the use of the Cuba or Jamaica coffee, much stronger in the peculiar powers of that article, is calculated to produce signal effects.

It would be well for physicians to institute a course of examination on this subject, which may enable them to determine if this article, in such universal use as a beverage, whilst its moderate use is both wholesome and agreeable, is not at the same time so medicinal as to entitle it to a place amongst the articles which promote absorption. Or, if they should not find this idea confirmed by observation, they may ascertain that as an article of diet, it is mainly valuable on account of its peculiar stimulating powers, and that it, apart from the sugar and milk commonly used with it, is *not* calculated to afford nutrition. And on the other hand, they may find, what is probably the fact, that India tea with the usual accompaniments is both exhilarating by virtue of its peculiar stimulating power, and either fails to promote absorption, or contributes more or less liberally to the end of nutrition. Observations in point may be made by investigating the habits of diet of patients laboring under hæmorrhoidal or fistulous affections. The same may be extended to lactating females, dropsical persons, &c.

## ARTICLE III.

*Remarks on Sulphate of Quinine. By M. ANTONY, M. D.*

In the last number of this Journal we noticed the cure of a periodical hemorrhage by the use of Quinine: remarking at the same time, that we gave the case, not for the purpose of having it imitated, but with the intention of attending to it on a future occasion. We now proceed to give below the remarks which, but for want of time, would have been appended to that article.

Formerly cinchona was looked on as a kind of specifick for intermittent fevers; and so, from its power of often arresting that form of disease, it may well have been. Now it has passed into disuse; its place being occupied by the same active principle in the more elegant and convenient form of Sulphate of Quinine. As experimental medicine progressed, the important fact was discovered, that other afflictions, observing like periods with intermittent fevers, were but these in disguise, and could, with equal ease, be arrested by the same active principle. Amongst these afflictions were periodical hemorrhage, periodical head ache, rheumatism, &c. &c., and hence the Quinine, in the early days of this article, obtained some celebrity in France for the cure of Megrin; and the French-American citizens who, from fear of calomel here, had become subject to sick head ache, were occasionally found returning from France with a parcel of Quinine powders, under the name of Megrin Powders. It is easy to conceive of very efficient causes of the perpetuation of this practice, however unreasonable in itself it may be. Most of the observations published on this subject, whether in periodicals or in standard works, have been the productions of cold climates, by the tonic effects of which, together with the less confirmed nature of those hepatic derangements in the higher latitudes, the system has, more frequently than in the south, possessed an energy sufficient to regulate the functions, the derangement of which had been the predisposing cause of disease, so soon as the peculiar morbid actions and phenomena, which constituted the existing form of disease, were arrested. By these greater



resources of nature, and the less degree of predisposition, therefore, the sequelæ which, under the other circumstances that obtain in warm or tropical climates are found to follow, have been prevented. Observers, however minute and accurate, have not probably therefore, had occasion to witness such frequent sequelæ as jaundice, chronic hepatitis, bilious colics, dyspepsia, dropsy, &c.; or if these have followed, it may have been at so much later a period, that the previous form of disease had been lost sight of, and they have been (improperly enough, no doubt,) attributed to other, and more recent causes. Such oversight, we may conclude, is very easy, when we remember how common it is for the most serious hepatic derangements and disorganizations to arise and continue for a long time, without even the suspicion of the patient, or of his physician. Such results are, in consequence of the low sensibility of the liver, not so uncommon as may, at first thought, be supposed. An illustration of this fact may be seen in FAITHORN'S treatise on the liver, in which a case is given of an enormous quantity of vitiated secretion, perhaps ten or eleven pints, being found in the biliary vesicle, and still the hepatic disorder had not, for a great while, been suspected by the patient or physician. But we need not go so far for an illustration: Every man's practice in a bilious climate, would afford to the close and experienced observer, perpetual demonstration of hepatic derangements, far beyond what might be suspected from any conspicuous external evidence.

We have intimated that the practice of resting the cure of bilious intermittents on Quinine, or on bark alone, is unreasonable. We repeat that it is so, however well that practice may comport with the fancies, or the high authorities of the present time. Reasoning apart, facts demonstrate this truth; but facts must be observed, before they can be known. To reason abstractly on this point in therapeutics, would require space not afforded in this place; and would demand the arraignment of the high-sounding theories, at present too much in vogue, and their subjection to a little sound logick—very little of which would be sufficient to shew that they are founded, 1st, On the *subversion of cause and effect*; and 2d, On *assuming the production and continuance of effects, without competent causes*. Under

such circumstances, the quinine may only be expected to act on some of the *effects* of the combined predisposing and exciting causes, so as to produce a metastasis, leaving diseases far more serious, in their ultimate tendencies, than the primary form; for the intermittents should be considered the *primary form* of the whole train of abnormal phenomena, but the antecedent of those sequelæ, which too often beset the patient, after a cure of intermittent by means only calculated to change the *form* of disease.

But what are the facts to which we have alluded? Forty years ago, Jesuit's bark and port wine, red bark, Huxham's tincture of bark; and, in some obstinate and inveterate cases, the shower bath, or the ague drop,\* were almost wholly relied on for the cure of intermittents; and what were the consequences? Dyspepsia, with diarrhœa, or obstinate constipation, bilious colic, cholera morbus, jaundice, chronic enlargements of the liver and spleen, with general inturmescence, and a long train of nervous symptoms, called by the common people, 'cachexy'; and 'cachexy drinks' were got up in turn for their cure. These were commonly made of chalybeates, as sulphate of iron in water, acetate of iron, made of vinegar and iron, steel dust, scales of iron, &c. in powder or electuary—these, with some diuretic vegetable, when any œdema was observed, were next administered. This was, however, often six or twelve months after the primary form of disease had been changed; and who then ever thought but that these were *new* diseases, *entirely* new, without the least connexion with any other. It was thought a very hard, though common case, that a *new*, and more formidable disease, should *attack* the patient so soon after recovery from *another*—the previous intermittent. The 'cachexy drinks,' used for these secondary diseases, had generally the effect of giving a little more energy to the appetite and the digestive powers for a time, which did not fail to perpetuate confidence in their use, until at length, another *new* disease supervened, which was called 'dropsy,' having, like the former, no *obvious* connexion with the antecedent series of evils, and to which the patient was most commonly, after all, to succumb. It was often impossible that he should withstand

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\* FOWLER'S Solution of Arsenic, was, at that time, *ague drop*, as Quinine Solution has since been.

such a succession of the worst of ills—a *new* one always succeeding the cure (as he thought,) of the former.

Notwithstanding all this error in the history of disease, and the pathology too, it was indeed sometimes the case, that this energizing plan of treating what was called the ‘cachexy,’ (and which was nothing more nor less, than the assemblage of those symptoms which attend chronic visceral obstructions,) was found to impart such healthy vigor to the system, (as we have said, is sometimes done by colder climates,) as to enable it, by this renewal of its energies, to perform the necessary elimination of noxious predisposing or perpetuating causes, so as gradually, but ultimately, to restore the system to good health; especially with the help, which was ordinarily looked to, the invigorating and purer atmosphere of winter. But no old scientific and unprejudiced practitioner, can now be found—(alas, few have withstood the practice of those days,) who observed the progress of diseases forty years ago, but can testify, that he then saw twenty or more cases of dropsy, from visceral obstructions, where he did one, ten years ago! And Bulimia, and its kindred forms of disease, which were then, almost as common as hernia is now, are, at the present day, rarely seen, at least, in the same location. And to what may this comfortable change of the lot of humanity, in the southern section of country, be attributed? In order to answer this inquiry, let us look for a moment at the history of the pathological and remedial departments.

Thirty years ago, calomel, with all its evils, became the common-place medicine in families; and it was soon the case, that it was rare to find a family throughout the country, without an adequate supply; which, by the way, we should remark, is an article that ought, in justice to itself and humanity, never to be administered, but under the sound judgment of a competent medical man. But this medicine, with all its evils, we say, which were not a little modified by the combination of jalap, being brought into use, has exercised a greater influence in lessening livers and spleens, than Dr. Ross’s lancet did, in the treatment of fever in Philadelphia: and which was indeed, nothing more nor less, than his powders of “ten and ten.” This medicine, in lessening, or rather preventing, these permanent visceral obstructions, has likewise prevented their almost certain effects,



in all their variety. And the dirt-eater, who was then soundly castigated for the correction of this loathsome practice, when forsooth his father or his physician should have been, is now, if found at all, speedily cured by a due course of visceral correction. This is mainly effected by the occasional use of slow mercurial purgation, and a change of location to an atmosphere less deleterious than those which continue perpetually to renew the predisposition to bilious disease.

It will not be denied that bark, quinine, and other tonics, and counter stimulants, have, in injudicious, as well as judicious hands, cured bilious fever; but the cases are rare in which these cures, if they may be so called, are not followed by more or less troublesome or dangerous sequelæ. But the cases in which they have not, have, we think, been more common under domestic, than under physician's presumptions: and why, but that in domestic practice, the solution being looked on as the ague drop, its use has been often adopted, at the first intermission of fever; whilst, on the other hand, the physician was rarely called, until the force of the disease had been for days impairing more and more the healthy condition, and functions of particular organs, and of the constitution generally. Those cases only will be found to yield to this course, and be followed by good health, wherein there are good reactive energies, competent, when the peculiar effects of the exciting cause are removed, to overcome finally the task imposed by the default of healthy function, and thereby remove the existing predisposition. And this result will be the more probable, if assisted by the early accession of cold weather, removal to colder climates: or a perpetuation of tonic effect, until this auxilliary is available. But such is not in general, nor can be the fact, in regular practice, in safety from secondary diseases, worse than the primary, until physicians become to be called at the very onset of the disease; and only then, with energetic habits: whilst it is well known, that these are not the most frequent subjects of this disease, but the contrary. Let us suppose the existence of some, or several of the organic derangements, attached to, and made by some, the chief nature of bilious fever. Is it not, according to one notion, a phlogosis of the stomach, or intestines, or both; or according to others, that of the cerebral, or the spinal centre, or

both? These are contended for by some, as cause, by others, as concomitants; and may be more reasonably by others again, as effects. But as to this, it matters not. Suffice it to say, that some, or all of these, do often exist with bilious fever, and make a part of its pathological nature, or condition. How then, can a direct and powerful tonic be admitted with this nature? The stomach will reject it, the intestines will pass it off cathartically, or it will give headache, vertigo, &c., and aggravate the febrile and inflammatory actions. But Quinine and other tonics do, in good constitutions, arrest the progress of the present type of disease. It, therefore, follows that these local derangements do not exist, either as causes or concomitants, *in the beginning* stages of bilious fever. It is true, that these, or some of them, do not unfrequently complicate, and give varieties to bilious fever of any of the usual types; but it follows in course, that when this is the case, the patient is not a suitable subject for the tonic treatment, as will be found on experiment; until the case is reduced to the simple state of bilious fever, which primarily existed; or the inflammatory phlogosis, so overcome as to exert but a *local* and partial influence, and allow, without detriment, the general action of the tonic. But these concomitants, or secondary phlogoses, are not all the difficult secondary lesions, whose natures are opposed to the action of tonics. Many others may, and do arise, and there are none so uniform, in genuine bilious fever, as either a phlogosis, or a functional torpor of the liver, and the consequences of either of these on the spleen, &c. all of which alike forbid the hope of prompt and permanent benefit from the use of tonics. Indeed, the hydropic disposition finds here its principal causation; and here, likewise, is the origin of most of the chronic nervous derangements, which so often follow the unphilosophical treatment of these febrile diseases.

It will be asked then, how does quinine, or the other tonics; or cutaneous excitors, as sinapisms, blisters, stimulating embrocations to the surface, &c., ever cure bilious fever, if not by supporting the nervous energies, or deriving action from the seat of phlogosis, to the surface, and so forth? We will answer, that they do operate by imparting that energy to the whole system, or to certain parts, whereby they are enabled to resist the acces-

sion of the introductory features of the bilious paroxysms; for it is not the stomach, nor the intestines alone, on which tonics act, nor the surface over the spleen, or the epigastrum alone, on which the counter-stimulant powers act, but the wrists, the legs, the thighs, and many other parts, with equal benefit. So, also, will a stimulant draught, or an anodyne pill—so, likewise, the cobweb, than which, there is not to be found a surer interceptor of bilious chill; and these two last, operate on very different principles, from simple stimulants and tonics. Again, we find that mental, as well as corporeal impressions, as anxiety, fear, surprise, anger, joy, and indeed, almost any thing, which shall counteract the tendency of disordered nature to bring around her train of morbid actions, may be used with a good degree of success, for the interception of bilious chill. But when this is effected, we have gained nothing but the overcoming the exciting cause; the system in general, as well as some particular organs, being left with all their original predisposition, and that actually increased by the past existence of febrile paroxysms. For when these periodical actions are suspended, every one knows how easy it is, by subjection to the action of debilitating causes, at the period for the bilious chill, or even at some other period, to cause its return.

A close observation of nature *should* be sufficient, whether it have the effect or not, to convince the most skeptical of this one fact, that there is a *bilious* chill, and a *bilious* fever, of character, type, and nature peculiarly their own. These peculiar characters should be familiarly understood by every practitioner. They are effects in direct and proportionate relation with the several causes concerned in their production, and like all other effects whose removal or prevention is desirable, call for remedies which are in good proportionate relation, in power and kind, with the noxious causes. This view cannot fail to reveal the nature of the deficiency which attached to the plan of cure above examined. We have seen that its tendency was at best only calculated to bring back the system to its state previous to the effects of the exciting cause—leaving it, however, with its predisposition, aggravated by febrile paroxysm. Here then is the great error; the obvious symptoms which certify plainly the existence of disease are overcome, but a fatal predisposition is



still left, and thus increased, to work out its disordering influence on the organization. The resulting phenomena will vary as exactly in proportion to the unity or the combination of morbid forces in the production of their effects, as in the direction of a moving body from a single force, or a combination of forces. Or, as in a chemical process in which sub. super, and neutral salts vary in proportion to the proportionate relation of the influencing causes; or as a tripple salt must be the result of certain other additions to the causation. In the first of these illustrations, if the single force be allowed to operate, the body impelled thereby will move in a direct line with that force: any intercepting means must therefore be also in this same direction. It tends to effects materially different from those resulting from combinations of forces. And again, in the other illustration, a sub, super, neutral or tripple, or a metallie salt will differ in its chemical or physical agencies, according to the circumstances of the combination; and all these, again, vary exceedingly in their resulting phenomena from the chemical or physical powers of the simple elements of which they were composed. The acids or alkalies, earths or metals, have their own appropriate phenomena, proportionate, in kind and extent, with their powers as such. To find their effects and to intercept their powers, then we may look for very different phenomena, and meet them with agents which bear a reasonable relation to the natures of the causes. As soon might we expect to correct an alkaline element by an alkaline agent, merely because it would neutralise the acid concerned in the formation of a salt with that alkaline element, as to expect that the treatment peculiarly adapted to the correction of an exciting cause, must correct also the predisposing. As the alkali, in this case, uncorrected, would continue to exercise its influence in all the future chemical process, without the influence of its proper corrective, so does the predisposing cause of fever continue to work out its peculiar phenomena, which are only correctable by proportionate means. The predisposition then demands correction, as well as the exciting cause, and the cure is incomplete, and never effected, unless by the resources of nature, if this be neglected. And here is the place for expectantism. When it is *clearly evident* that the resources of the system are sufficient for the correction of the

morbid predisposition, this correction may be left thereto: but no less sound judgment is necessary in determining this point, than in determining the use of mercury or of arsenic, for it is not less dangerous to leave a work for nature to perform, out of proportion to her powers, than it is to give a powerful medicine not proportionate to the exact demands of the case. But when it is not clearly evident, that the system is capable with its own resources to be entrusted with the correction of predisposition, it should of course not be more readily confided to her than to any other inefficient agent. Nor is it so often the case as the friends of expectantism may be inclined to think or to hope. This truth is evident, not only in the observations of nature in such cases, but it may be logically established with great precision, thus:—1. Here is a given human system in health, consequently in possession of all its natural physical and moral endowments. 2. Here are predisposing causes of bilious disease. 3. Here remark that, notwithstanding the primary good health in all respects, predisposition or a predisposing state of the system supervenes, proving the power of this cause to invade the system in defiance of all its vires naturæ medicatrices in full perfection. 4. An exciting cause is applied, and the phenomena of a bilious fever developed, as the legitimate result of the action of these causes in the system. 5. The influence of the exciting cause is overruled by a powerful tonic, as quinine, steel, arsenic; leaving the system with its predisposition actually aggravated by the existence of febrile paroxysm; or, if you please, without this aggravation. In the sixth place we will ask, how, if the law be true, which nobody disputes, that similar causation in all respects must be followed by like results. how, we ask, if these things be so, can it be possible for the resources of a system—the vires medicatrices, undoubtedly impaired by the actual invasion of disease, effect the final extermination of a cause whose invasion it could not, with all the advantages of fine health, prevent? As well might we *expect* the physical resources of a country might conveniently expel her invaders from her centre, after being beaten down and prostrated by their superior force, when, with all preparation, and in the fullness of her powers, she could not at first repel the invasion. But if she form allies of sufficient power, she may be

expected to effect the expulsion, and restore the commonwealth to peace and safety. Just so is the reasoning in the case of the predisposition. Remedies only which can measure powers with the invader, will be able to secure the desired renovation of perfect health: whether they be such as shall increase the natural energies permanently, and lessen the application of predisposing influences, as winter, a better climate, &c., or such as shall more directly attack and exterminate the enemy by a physical force competent to the end desired.

We will remark here, in conclusion, that periodical hemorrhage, as here related to, is an accident, so far as its cause is concerned, of the same nature as topical congestion; and is indeed, nothing more nor less than the effect of topical congestion in the part whence the hemorrhage comes, which is a part easily relieved by spontaneous topical depletion; or in some more distant part which cannot be thus relieved, but which determines an unusual afflux to the part which becomes the seat of hemorrhage. Its cause is, therefore, the same with the cause of congestions, infarctions or engorgements of the spleen, stomach, intestines, and the parts generally whence the portal branches originate, as well as of the great nervous centres. These, however, are, like the hemorrhage, secondary, and have generally for their cause, obstructed hepatic circulation, with consequent induration and tremefaction of liver and spleen—fruitful sources also, of those gastric and intestinal inflammations, which have received the names of gastrite and interite, so commonly believed to arise in bilious pyrexia; as well as the spinal congestion and irritation, which affords such a distressing variety of neuralgic symptoms.

These hemorrhages are generally from the nose, lungs, stomach and intestines, hemorrhoidal regions, or the uterus. These parts are easily relieved temporarily, by spontaneous depletion. Not so with the spleen, mesentery, spinal and cerebral centres, &c. Now, we consider all these caused by an unusual determination to, or retention of blood in them, in consequence of some obstruction to its wonted and important circulation through some other parts of its route. The primary seats of dangerous obstructions, are generally the liver and the uterus. This brings us to the point we had in view. No one will contend that



Quinine is possessed of those deobstruent powers, which should justify our trusting to its operation for the removal of these primary visceral, or organic obstructions—now to become, unless removed, the cause of numerous sequelæ, such as congestions in various parts, with or without irritations, hemorrhages, lymphatic obstructions, &c. What then, we would enquire, is it calculated to do? Only, at best, by meeting the demands of the exciting cause of that state, with some energising influence, to change the periodic exacerbational tendency, and thereby check the present *form* of the disease; and leave causes present, and still in operation, to produce their more serious effects, on other, more vital, and less relievable parts. Hence then, a dreadful train of afflictions too often follow, not all in the same case, but some of them sooner or later, in almost all thus treated; amongst which, we may name hemorrhoids, fistula, follicular enterites, bronchitis, dyspepsia, constipation, diarrhœa, colic, hepatic derangements, with all their consequents; spinal irritation, with all its numerous afflictions and mischiefs, &c.

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## PART II.

### REVIEWS AND EXTRACTS.

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*Report on the Radical Cure of Hernia. Extract from the Minutes of the Philadelphia Medical Society. April 29th, 1837.*

THE valuable paper above named, is contained in the *American Journal of the Medical Sciences*, for Aug., 1837, and should, in justice to its merits, have been noticed last year; but we have rested in the hope of being able to see a specimen of the improvements of Dr. CHASE, that we might exercise a closer judgment on their merits, than we could by merely reading the

several reports, and Dr. CHASE's book on the radical cure of Hernia. We regret that although we have made no inconsiderable effort to effect that end, even to the present time, the truss of Dr. CHASE has not, so far as we are able to learn, reached the shores of Georgia. Dr. CHASE's treatise on the radical cure of hernia, with a valuable essay by the same gentleman, which appeared not long since in this Journal, intended to guard against the abuses of the truss, together with the preliminary report of the committee of the Philadelphia Medical Society afforded satisfactory evidence of the valuable talent concerned in the improvements and the examination of the same. And the final report, the document now before us, is as satisfactory and conclusive as could be desired; still, in noticing the article, we have hoped to be able to speak from observation, in addition to the extensive and satisfactory evidence of the worthy committee, on the subject of this valuable improvement. We feel unwilling, however, longer to delay laying before the profession, a brief notice of its merits, as contained in the final report of the patient, persevering, faithful and talented committee.

It will be recollected, that as long ago as the session of the Philadelphia Medical Society in December, 1834, Drs. COATES, PARISH and ASHMEAD were appointed a committee for the investigation of the merits of STAGNER's Truss, and other proposed means of radical cure of hernia. This committee have faithfully labored in the premises, with experiments and observations on numerous cases in point, until the 29th of last April; an instance of persevering zeal, industry and faithfulness, highly creditable to the gentlemen who compose it, and meriting the obligation of the community. After laboring one year in the discharge of the duties assigned them, they read a partial, or preliminary report to the society, at the sessions of the 5th and 12th of April, 1835. This preliminary report was published in the xvii. vol. of the American Journal of the Medical Sciences.

In this preliminary report, some valuable conclusions were arrived at, which were all important; for the investigations seem to have been pursued with great care and accuracy, and the conclusions not hastily drawn. Amongst the most important of them, we will name the following:—

1. "That the most *perfectly retentive* apparatus, is that which affords the strongest probability of radical cure; and that long-

continued or considerable irritation in the parts, 'as contended for in the use of STRAGNER'S truss,' so far from being an advantage, in reality, opposes the successful treatment; that there are no facts in their possession which tend to prove indisputably, that even slight irritations of the superficial tissues are transmitted to the tendons of the abdominal muscles in such a manner as to accelerate the cure; and that radical cures are some times effected without any other irritations than such as are altogether fugitive in character."

2. "That the retentive power of solid blocks exceeds, *cæteris paribus*, by considerable difference, that of pads composed of soft materials."

To this, the final report adds, that "The whole current of the evidence since presented to them, most fully substantiates the correctness of this position; as the number of cases has been large in which the various instruments with soft pads, have failed in effecting accurate and permanent retention, and in which the more perfect apparatus with blocks of proper form, have been substituted with complete success."

The committee have demonstrated, in their various investigations, the impropriety of substituting even "firm, but elastic materials, for the absolute solids in the construction of the armature of trusses; and the inadmissibility of caoutchouc, as a direct and permanent application to the skin," they consider as established by the well known fact, that "the irritating effects of this substance are so well known in the neighborhood of the caoutchouc cloth manufactory near Philadelphia, that it is extensively employed there, as a popular remedy in cases of chronic rheumatism."

We remark, in passing, that this observation, relative to the fact of the irritating powers of caoutchouc, having brought it into popular use as a remedy in chronic rheumatism, is a valuable corroborative of Dr. CHASE'S essay on the caoutchouc as an endermic application for the purpose of counter irritation.\*

Excluding much of their investigations from the report, by their conclusions, that the *most retentive* means offered the best promises of cure; and that absolute solids offered the best armatures for effectual retention, the committee next proceed to consider only "the trusses with solid blocks, now in use or recommended by inventors." These, they "divide into two classes:"

\* See Southern Medical and Surgical Journal, vol. i, p. 663



"1. Those which are constructed for the express purpose of producing irritation, in order to effect a condensation of the skin, cellular tissue, and the fascia supreficialis, or the abdominal tendons about the hernial orifice, into one common mass of adhesion."

"2. Those which are designed to secure the constant, perfect and safe retention of the bowel, without the attempt to create intentional irritation in the parts pressed by the instrument."

"The first class includes the truss of STAGNER, and the various apparatus of Dr. HOOD, for the treatment of common inguinal, ventro-inguinal, femoral and umbilical hernia; also PRICE's and SAMPLE's improvements, of conoidal truss-blocks of lead, tin, and other metals."

"The second class contains the old and well known instrument introduced to the notice of the society by Dr. PERRINE, during the debate which followed the presentation of the preliminary report, in 1835. The specimen presented to the society was armed with a wooden block; and since making their preliminary report, the committee ascertained the fact, of which they were not before assured, that the wooden block had been in use twenty years, and probably for a much longer period before its improvement by Mr. STAGNER. This class also embraces all the instruments invented by Dr. CHASE, which are five in number, it will be spoken of in detail hereafter."

"The arguments of the committee on the first of these classes, naturally arrange themselves under two heads. 1st. Comments upon the supposed establishment of adhesive inflammation; and 2ndly, an estimate of the retentive power of the apparatus."

On the first of these topics, the committee, after many, patient, and fair experiments and observations, necessarily conclusive in their nature, came finally to the following unavoidable result, that they "feel compelled to regard these facts" (their own experiments and observations,) "as conclusive against the truth of the doctrine, that the trusses, or blocks of the first class produce a real condensation of, or adhesion between the skin, the sub-cutaneous cellular tissue, and the fascia superficialis, or abdominal tendons." They "therefore entertain decidedly the opinion, that the hypothesis of condensation and adhesion is intenable."

On this subject the committee go further; and being, very properly, unwilling to give heresay evidence, they give an instance which came under their own observation, (case xii,) verifying their fears that the continuance of the pressure of this

first class of trusses, might endanger the integrity of the tendons themselves. In this case, this result had actually taken place; and the patient was still, at the time of the final report, under treatment for this serious misfortune. While the bowel is, however, perfectly retained by one of Dr. CHASE's large ventro-inginal trusses, time alone can determine the ability of the tendons to recover their original structure.

The committee next "proceed to examine the retentive power of the trusses of the first class, so far as this subject remained unfinished in their preliminary report; alleging, at the same time, that whatever of retentive power trusses of this class may possess, to it alone is attributed the good attendant on their use. This brings us to the 2nd, and last head under which the argument on the first class of trusses was arranged.

For the purpose of testing the retentive power of this class of trusses, the committee have again labored with great patience, fairness and perseverance, all of which, together with their reasonings on the subject, result in the following conclusions:—

"1st. That the trusses of the first class do not secure the complete permanent retention of the bowel with all the certainty which may be obtained by mechanical means."

"2nd. That although it is extremely probable that radical cures may be occasionally effected by the use of such instruments, it has not been proved that the success following their employment, exceeds that which has been obtained by the better kinds of trusses previously in use."

"3rd. That the action of these instruments is often attended with serious and unnecessary inconvenience, uneasiness and pain," and

"Lastly, That their employment for too long a time, when the degree of pressure exerted by them is considerable, sometimes produces absorption of the tendons, dilatation of the hernial orifice, and an extension of the evils they are designed to remove; and that any attempt to obviate this danger, while the support of the instrument continues to be required, will diminish the security of the retention."

From all which reasons, the committee do not feel warranted in making a favorable report on the claims of this class of trusses, upon the confidence of the society.

EBERLE'S, or the RACHET truss having been examined with the first class, the committee next pass to the only remaining part of their duties, which is the consideration of the six instruments of Dr. CHASE.

In considering Dr. CHASE's trusses, which make up the whole of the second class, the committee commence with setting forth their alledged claims.

"The object of these instruments is to secure the perfect and permanent retention of the viscera in hernia, in order to permit the powers of nature to effect a radical cure, after the removal of the misplaced parts, which are supposed to offer the greatest obstacle to her success."

They then proceed, in the first place, to investigate "how far they fulfil the all-important purpose of retention; leaving their effects upon the tissues, the *modus operandi* of nature in effecting the cure, and the extent of the results to be discussed in the sequel under distinct heads, which they subsequently proceed to do in the most thorough manner.

"The inventions and improvements of Dr. CHASE, many of which have been adopted since the presentation of the preliminary report, extend to all parts of the truss and its appendages; and his attention to minute, but highly important details, has been carried to an extent, never equalled by any of his predecessors in this branch of surgery. The complete instruments employed by him, are—1st. The inguinal, or common inguinal truss. 2nd. The ventro-inguinal truss. 3rd. The femoral truss. 4th. The umbilical truss. 5th. The umbilical belt. 6th. The double truss."

To each of these a separate section is given, in which each part is particularly considered, viz: The block; the block attachment; the spring and strap-attachment; and the appendages, and all illustrated by wood cuts. After duly explaining every part of the inguinal truss of Dr. CHASE, the committee have been pleased to say, that they

"Feel bound honestly to state their convictions, that this instrument surpasses all others known to them, in the accuracy and permanence of its retentive power in common inguinal hernia; a conviction fully sustained by all their practical observations on the action of trusses. The instrument is worn with so much comfort, that patients generally relinquish it unwillingly, and sometimes *absolutely refuse to do so*, even when pronounced well by the surgeon. The committee find themselves unable to suggest any improvement, or to point out any defect of principle or construction in this truss, as now employed by the inventor."

Of the VENTRO-INGUINAL TRUSS of Dr. CHASE, they say:

"To the complete instrument, as it has been actually employed



during the last year, the committee may safely apply the same language used in concluding their remarks on the inguinal truss."

Of the FEMORAL TRUSS. The committee having been very limited in their opportunities of testing its value, are not prepared to say much definitely on its absolute perfection. "How far it may answer the special purpose of its construction, by entering under the fold of poupart's ligament, and acting almost directly on the femoral ring, the committee will not venture to judge from a single case. The report of Dr. CHASE as to its result in other instances, is favorable; but neither that gentleman, nor the committee, regard it as having acquired the highest degree of perfection of which it is capable."

It is expected to undergo farther modifications.

Of the DOUBLE TRUSS, the committee presented a new article, the invention of Dr. CHASE since the preliminary report, and now for the first time laid before the society.

"It is an association of two single trusses, so combined as to be perfectly independent in their action, without the slightest interference; yet so associated by means of the straps and loose spring covers, that they present the appearance, and act with all the convenience of a single instrument. \* \* \* The committee cannot speak too highly of this beautiful invention, but it may be safely permitted to speak for itself."

Of the UMBILICAL TRUSS. "This truss has secured the perfect and constant retention of the bowel in all the cases seen by the committee, two of which were of a peculiarly unfavorable character."

"The committee deem it, therefore, almost unnecessary to state their decided preference of this instrument."

The UMBILICAL BELT. The committee concluded their brief observations on this instrument in the following words:—

"In condemning the umbilical belt of Dr. CHASE, together with all its predecessors, the committee feel much pleasure in stating that after practical tests, which they did not deem necessary, it has been frankly relinquished by its inventor, although it has *effected radical cures in two cases*. (See cases xx. and xxix.)"

In concluding their comparison of the two classes of trusses, and after amply testing the actual merits of each, they

"Deem any further comment on the retentive power of the trusses of the second class (made up of those of Dr. CHASE,)

altogether unnecessary. These instruments certainly fulfil to admiration the two grand requisites which they consider necessary to bring the chances of radical cure of hernia to a maximum."

"After all that has been stated, the committee feel themselves fully warranted in the following conclusions :

"1. The retentive power of solid blocks is, *cæteris paribus*, superior to that of soft pads in the treatment of hernia, as has been already stated in the preliminary report.

"2. The chances of radical cure depend upon the perfection and permanence of the retention.

"3. The perfection and permanence of the retention depend—first, upon the mechanical action of the instruments; and, secondly, upon the power of the parts affected to bear that action without danger of physiological accidents of sufficient importance to interfere with the treatment.

"4. All the instruments with solid blocks contrived before the recent inventions of Dr. CHASE, are decidedly liable to important mechanical objections, and all of them, with the exception of the Rachet truss, are moreover capable of producing physiological accidents of sufficient importance to interfere with the treatment.

"5. The construction of the Rachet truss is such as to render retention uncertain even in ventro-ligatal hernia, to which form of the disease alone, it is tolerably well adapted.

"6. The instruments of Dr. CHASE have effected the permanent and accurate retention of the intestines in every case of hernia observed by the committee, without material inconvenience to the patient, and often under trials more severe than are usually ventured upon by those who wear other trusses; trials which would be imprudent with any other apparatus known to the committee.

"7. If we except the femoral truss, these instruments have stood the test of much practical application without superinducing any physiological accidents of sufficient importance to interfere with the treatment.

"8. The mechanical principles upon which the femoral truss is constructed appear highly ingenious and promising, and unless this instrument should be found hereafter to be productive of important physiological accidents, it must take precedence of all other modes of treating this variety of the disease. No such accidents are yet known to have been produced by its employment; but the committee have not enjoyed the opportunity of personal inspection in a sufficient number of cases to determine general results, nor do they deem it proper to receive evidence from any other quarter in discharging the trust reposed in them by the society."

The committee, on this important subject, consider

“A cure is radical, when the tendinous and fascial barriers to the egress of the bowel are brought or restored to their normal or original firmness and power of resistance. The only means by which such a result can be tested, are the firmness and resistance of the orifice when placed where it is subject to examination, and the absence of all appearance of protrusion after the truss has been relinquished for some weeks or months, and after the patient has pursued his usual avocations, resorting frequently to more severe exercises, such as coughing, leaping, fatiguing walks, swimming, lifting, dancing, riding on horseback, &c.”

“The time required for the radical cure of an ordinary case of ventro-inguinal or direct hernia, in the adult, appears to be from twelve to eighteen months. The common inguinal hernia is believed to become secure at an earlier period, and the umbilical, later; all varieties, however, recovering much more rapidly in childhood, in which cases the committee have found, since their preliminary report, and contrary to the opinion then advanced, that this class of trusses is “borne without inconvenience in infancy.”

We have but one regret on the subject of this report, and that is that it is not in our power to give it *entire*; for it is so fair, *conclusive* and well drawn up, we feel that scarcely can a sentence of it be omitted without withholding something valuable from our readers, and doing injustice to the committee.

We cannot now take our leave of it, however, without giving two or three more of the latter paragraphs *entire*. It will be remembered that the great object of the late improvements in this department of surgery was to effect *RADICAL CURES* in these cases, without resort to the knife. After all, then, the value of the improvements must be determined by their practicability, their safety and their unequivocal success. It should be also borne in mind that time, considerable time, only can develop the final success. The following paragraphs give us the results of the practice, so far as they could be accessible to the committee.

“A variety of causes have tended to reduce the number of cases in which the whole history of the accident, the treatment, and the result have been placed within reach of the committee. Among the most important of these may be mentioned the extreme unwillingness of many patients to relinquish the use of the truss, even when urged to do so by the united advice of their surgeon and the members of the committee; the removal of many



patients to a distance, after having been a long while under treatment, but before it has been deemed perfectly safe to lay aside the instrument; and the unwillingness of some persons to submit to the necessary examinations; yet, notwithstanding these difficulties, the amount of indubitable evidence actually furnished on the question of radical cure has been considerable, though none has been relied upon as basis for conclusions, except such as has been furnished by the actual examinations of one or other of the members of the committee, and the testimony of the patients themselves.

"All the individuals who have relinquished the use of the trusses approved by the committee, after having worn them for six months or more, and who have been afterwards examined by a member, or members of the committee, have been subjected to the necessary tests, and are believed to be *radically cured in the sense of the foregoing definition*. A still larger number who are yet under treatment, give promise of a similar result, and those who refuse finally to relinquish the instrument on the advice of their surgeon, present, in the firmness of the rings, and in the absence of protrusion under exertions performed when the trusses are temporarily removed, very strong grounds for believing the cure to be *radical* in them also. Two cases only of old ventro-inguinal hernia, occurring in persons of nearly sixty years of age, and so large that the orifices admitted of the free passage of two or more fingers within the reverted skin, have been deemed incurable; but even in these, the contraction of the rings, and the resistance to protrusion when the trusses have been removed by the patient for a few hours, render the impossibility of cure by no means certain; and it is deemed improper ever to subject the patients to the tests necessary to determine the question.

"An appendix follows the report, detailing upwards of thirty cases. Case xix in this appendix, which is an umbilical hernia of many years standing; enormous orifice, is completely retained by CHASE'S umbilical truss, with a block six inches in diameter. 'This patient is restored to usefulness, but is deemed incurable.'

Finally, it is declared, that "the cases observed include all the usual forms of external hernia, whether resulting from mechanical or physiological causes; and also, some instances of double and triple hernia."

*Human Electricity.*

We extract the following narrative, extraordinary in degree, but not in kind, from SILLIMAN'S Journal for January, 1838, with the fullest confidence in its truth. We are aware that the statement of Dr. HOSFORD will be looked on, by many who are at a distance from him, as a hoax, or at least as an exaggeration, or an unfair narrative of facts: nor do we suppose that Dr. MUSSEY'S statement will have the power of wresting it from the fate of skepticism with some readers. In their fullness of pride, human beings are wont to disbelieve, especially in philosophy and religion, that which they do not understand.—This is the case to almost as great an extent as the disposition to disbelieve whatever is counter to their party views or their previously avowed notions. We know nothing of Dr. MUSSEY but his character as a professional man: the same may be said of Dr. HOSFORD. Professor SILLIMAN, all the world know to be, in literature and philosophy, amongst the stars of the first magnitude. But, we are told that he is so credulous as to be very susceptible of tricks of imposition. Perhaps he may be. Honest men, and men of profoundest science, do often become so familiar (so to speak,) with the wonders of nature, that, with the predisposition their own honesty gives them, it becomes easy to believe there are still things which their own intellects can neither analyze nor comprehend. It is the effect of profound knowledge to humble the heart and generate reverence for that matchless wisdom which is found displayed in the heights and depths of Nature's domain: and to teach this truth, which seems to be neither known nor believed by all, that neither the knowledge nor the comprehension of all things is yet given to man.—It is a very small part of the great golden rule of virtue which requires that "we should do unto others as we would that they should do unto us," to consider all men honest until found otherwise—all men true, until proved false. But there are other grounds for credence in this case. When human evidence which we should not dare to doubt in other matters is afforded, our own want of powers to analyze the subject, is no justification of our skepticism.

We are not content with less than an entire extract of the statement made by Dr. WILLARD HOSFORD, at the instance of Professor SILLIMAN; with the preliminary remarks of the latter gentleman, from the *American Journal of Science and Arts*, for January, 1838, page 394.

*Extraordinary case of electric excitement, with preliminary remarks by the Editor.* The facts stated below were, by my request, kindly communicated for this Journal by Dr. Willard Hosford, a respectable physician of Orford, New Hampshire, the place where the occurrence happened. Being in that place in September, and finding the belief in the facts to be universal, particularly on the part of persons of judgment and science, (as at the neighboring University, Dartmouth, at Hanover, eighteen miles south,) I became desirous of preserving a record of them.

Dr. Hosford remarks in the letter accompanying his communication, that abundant evidence from the most intelligent persons is at hand for the support of every point in the case. He observes also, that the appearance of the aurora during which the electrical excitement of the lady took place, "was precisely the same as that described by some gentlemen at New Haven."

Speaking of it Dr. Hosford adds, that "the heavens were lighted with a crimson aurora of such uncommon splendor, as to excite no ordinary emotions in every observer, and we had, he observes, in addition, an electrical exhibition much less dazzling, but more singular and to the parties concerned more interesting."

A lady of great respectability, during the evening of the 25th of January, 1837, the time when the aurora occurred, became suddenly and unconsciously charged with electricity, and she gave the first exhibition of this power in passing her hand over the nose of her brother, when, the astonishment of both, vivid electrical sparks passed to it from the end of each finger.

The fact was immediately mentioned, but the company were so skeptical that each in succession required for conviction, both to see and feel the spark. On entering the room soon afterward, the combined testimony of the company was not sufficient to convince me of the fact until a spark, three fourth of an inch long, passed from the lady's knuckle to my nose causing an involuntary recoil. This power continued with augmented force from the 25th of January to the last of February, when it began to decline, and became extinct by the middle of May.

The quantity of electricity manifested during some days was much more than on others and different hours were often marked by a like variability; but it is believed, that under favorable circumstances, from the 25th of January to the first of the following April, there was no time when the lady was incapable of yielding electrical sparks.



The most prominent circumstances which appeared to add to her electrical power, were an atmosphere of about 80° Fahr., moderate exercise, tranquility of mind, and social enjoyment; these, severally or combined, added to her productive power, while the reverse diminished it precisely in the same ratio. Of these, a high temperature evidently had the greatest effect, while the excitement diminished as the mercury sunk, and disappeared before it reached zero. The lady thinks fear alone would produce the same effect by its check on the vital action.

We had no evidence that the barometrical condition of the atmosphere exerted any influence, and the result was precisely the same whether it were humid or arid.

It is not strange that the lady suffered a severe mental perturbation from the visitation of a power so unexpected and undesired, in addition to the vexation arising from her involuntarily giving sparks to every conducting body that came within the sphere of her electrical influence; for whatever of the iron stove or its appurtenances, or the metallic utensils of her work box, such as needles, seissors, knife, pencil, &c. &c. she had occasion to lay her hands upon, first received a spark, producing a consequent twinge at the point of contact.

The imperfection of her insulator is to be regretted, as it was only the common Turkey carpet of her parlor, and it could sustain an electrical intensity only equal to giving sparks one and a half inch long; these were, however, amply sufficient to satisfy the most skeptical observer, of the existence in or about her system, of an active power that furnished an uninterrupted flow of the electrical fluid, of the amount of which, perhaps the reader may obtain a very definite idea by reflecting upon the following experiments. When her finger was brought within one sixteenth of an inch of a metallic body, a spark that was heard, seen, and felt, passed every second. When she was seated with her feet on the stove-hearth (of iron) engaged with her books, with no motion but that of breathing and the turning of leaves, then three or more sparks per minute would pass to the stove, notwithstanding the insulation of her shoes and silk hosiery. Indeed, her easy chair was no protection from these inconveniences, for this subtle agent would often find its way through the stuffing and covering of its arms to its steel frame work. In a few moments she could charge other persons insulated like herself, thus enabling the first individual to pass it on to a second, and the second to a third.

When most favorably circumstanced, four sparks per minute, of one inch and a half, would pass from the end of her finger to a brass ball on the stove; these were quite brilliant, distinctly seen and heard in any part of a large room, and sharply felt when they passed to another person. In order further to test

the strength of this measure, it was passed to the balls by four persons forming a line; this, however, evidently diminished its intensity, yet the spark was bright.\*

The foregoing experiments, and others of a similar kind, were indefinitely repeated, we safely say hundreds of times, and to those who witnessed the exhibitions they were perfectly satisfactory, as much so as if they had been produced by an electrical machine and the electricity accumulated in a battery.

The lady had no internal evidence of this faculty, a faculty *sui generis*; it was manifest to her only in the phenomena of its leaving her by sparks, and its dissipation was imperceptible, while walking her room or seated in a common chair, even after the intensity had previously arrived at the point of affording one and a half inch sparks.

Neither the lady's hair nor silk, so far as was noticed, was ever in a state of divergence; but without doubt this was owing to her dress being thick and heavy, and to her hair having been laid smooth at her toilet and firmly fixed before she appeared upon her insulator.

As this case advanced, supposing the electricity to have resulted from the friction of her silk, I directed (after a few days) an entire change of my patient's apparel, believing that the substitution of one of cotton, flannel, &c. would relieve her from her electrical inconveniences,† and at the same time a sister, then staying with her, by my request, assumed her dress or a precisely similar one; but in both instances the experiment was an entire failure, for it neither abated the intensity of the electrical excitement in the former instance, nor produced it in the latter.

My next conjecture was, that the electricity resulted from the friction of her flannels on the surface, but this suggestion was soon destroyed when at my next visit I found my patient, although in a free perspiration, still highly charged with the electrical excitement. And now if it is difficult to believe that this is a product of the animal system, it is hoped that the skeptics will tell us from whence it came.\*

In addition to the ordinary appurtenances of a parlor, it may

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\*It is greatly to be regretted that the spark had not been received into a Leyden bottle until it would accumulate no longer, and then transferred to a line of persons to receive the shock.—*Ed.*

†This could hardly have been expected from non-conductors; we are informed that the lady was relieved of the electricity by a free communication with the earth by a good conductor, in the manner of a lightning rod, as by touching the stove and its connection with the earth through the medium of the chimney.—*Ed.*

‡ It appears to be Dr. Hosford's opinion, that the electricity was not caused by the aurora that was coincident with its first appearance, but that it was, in some way, an appendage of the animal system.—*Ed.*

be proper to add, that the lady's apartment contained a beautiful cabinet of shells, minerals, and foreign curiosities.

This lady is the wife of a very respectable gentleman of this place; she is aged about thirty, of a delicate constitution, nervous temperament, sedentary habits, usually engaged with her books or needle-work, and generally enjoying a fine flow of spirits.

She has, however, never been in sound health, but has seldom been confined to her bed by sickness even for a day.

During the past two years she has suffered several attacks of acute rheumatism, of only a few days continuance, but during the autumn, and the part of the winter preceding her electrical development, she suffered much from unseated neuralgia in the various parts of her system, and was particularly affected in the cutis vera, in isolated patches; the sensation produced being precisely like that caused by the application of water heated to the point a little short of producing vesication; in no instance, however, did it produce an apparent hyperæmia, but about the last of December a retrocession took place of this peculiar irritation, to the mucous membranes of the fauces, œsophagus, and stomach, there producing a very apparent hyperæmia, and attended, during the exacerbations, with burning sensations that were torturing indeed; and it was for the relief of these symptoms that medical means were used, but it was found no easy matter to overcome this train of morbid action.

It was nearly immaterial what medicines were used; no permanent relief was obtained, and no advantage resulted from the use of the alkalies, or their varied combinations. In a few instances, a dose of the acetate of morphine was given to secure a night's rest, but she seldom made use of an anodyne.

The effervescing soda draught being very acceptable was freely given—from which, in addition to a rigid system of dietetics, the influence of the opening spring and the *vis medicatrix naturæ*, relief came of her electrical vexations, of most of her neuralgia, and other corporeal infirmities, and to this time, a much better state of health has been enjoyed than for many years.

ORFORD, N. H., Nov. 16, 1837.

The only strange fact in this case, is the coincidence (for we consider it nothing more) of the first displays of unusual electrical developments in the person of the lady, and the occurrence of the Aurora Borealis. The Aurora Borealis we well remember, as its beautiful displays were very obvious at this place. It was remarkable for its conspicuousness thus far south; but we hold it impossible that the electricity afforded by the lady could have been owing to a charge from that electrical phenom-



enon. It is a cause constantly occurring without the production of such effects; it is also a cause perfectly incompetent to their production, as is evident to any one familiar with the most common laws of electricity. A charged prime conductor, or a powerful electrical battery, would have been incompetent. The phenomena clearly evince that the source of the electricity displayed was within the body. We are surprised that Professor SILLIMAN did not give an unequivocal decision on this point instead of stating in a foot note that Dr. HILSFORD thought "that it was, in some way an appendage to the animal system." But great men are sometimes rather scrupulous of giving their own opinions on points, for the proper reception of which they think the world is not fully prepared. They are generally afraid to venture their belief in a fact, the rationale of which they may not be fully prepared to set forth. Such has been the case with many; it is indeed generally with men who wish to be considered philosophers. We believe this to have been the case with M. DUPUYTREN when, on a certain occasion not long after the free introduction of acupuncture into France, he introduced fifteen or sixteen needles into a rheumatic knee to the entire relief of his patient. He felt, on touching the end of one needle, a peculiar sensation which, by its strong resemblance to a slight electrical sensation, attracted his particular attention. Determined to ascertain if possible its nature, he connected the ends of all the needles with a small wire, thus forming them into a kind of battery, and procured obvious sparks of electricity; still, however, notwithstanding he was forced to acknowledge the fact that electricity actually passed off from the diseased knee in this case, he took care to pronounce the decided opinion that this discharge of electricity had nothing to do with the curative effects of the operation. And full of theorising without facts or competent causes as are some of the gentlemen of dignity at the great French metropolis, they have had very little to say of many palpable facts which have been before them; such for instance as the relief of some acute pains and inflammations by simple acupuncture, and the relief of chronic ones on infusing into the part, by the needle, the charge of an electric or galvanic battery.

We are pleased with the case with which Professor SILLIMAN

has favored us, not only on account of our implicit belief in the truth of the facts declared, and our admiration of the wonderful amplitude of Nature's resources which these facts reveal; but because they offered a strong illustration of the truth of a doctrine which we have long entertained, and which we consider of paramount importance in the science of animal and vegetable life and disease. It is, *that the human system has within itself resources adequate to the generation of free electricity, competent in quantity, as well as to the proper insulation and application of the same physical agent; for the development of all the functions of life, and the phenomena of disease.*

This we consider no postulation, but the declaration of a doctrine, the truth of which is as demonstrable as the circulation of the blood; and which, in its abundant resources, is calculated to render plain and intelligible, most, not to say all of the phenomena of life, health, disease and death. This we are aware will also be viewed askance, and indeed rejected, because its truths are not, at first view, strikingly intelligible to those who may not have investigated them. But this matters not, when truth is concerned.

We regret that some one of those friends who are in the habit of borrowing rare books and retaining the loan, has deprived us of the opportunity of giving, in connexion with this case, an exact extract from BRYDONE'S Tour in Sicily and Malta, of a case precisely similar in its philosophy, and very much so in its leading facts. In the absence of that volume of this little work which contains the statement alluded to, we will endeavor to give the leading facts of the case by memory, from a reading some eighteen or twenty years ago. This work has been little known, and less read, because early stamped with a want of confidence in its entire truth, which we consider chiefly or solely owing to the disposition to doubt the truth of this case.

Somewhere amongst the Alps, we think, he met with a lady of rank, of high sanguine, or sanguineo-nervous temperament, who when in full dress, emitted sparks of electricity to any conducting body near her, as regularly as the charged prime conductor of an electrical machine. The displays were very evident to the sight and feeling, the sparks passing a considerable distance. Her full dress amounted to a good silk insulation.

But we need not go farther than our own firesides for evidence of the internal development of electricity. Here, without other insulation than common shoes, we find on a cold, dry morning, that our children's hair is divergent, from the repulsive power of electricity, as if charged on an insulating stool. We find the same phenomenon in the tail and mane of our horses on a cold dry day. There are, it will be admitted, but two possible resources for this charge: these are either without or within the body. It is reasonable to conclude that it is not from without; for the only exterior sources are electrical generators, or a charged atmosphere. In this case, the former of these is not present. The latter, to have imparted it, would be of the same electricity and would, according to a well known law of electricity, that positive repels positive, repel, instead of attracting it. The conclusion is then inevitable, that the electricity thus displayed arises from the animal organism.

*Of the compression of the Carotid Artery in the treatment of Convulsions: By A. TROUSSARD, Physician to the Hospital St. Antoine, and agr. gr. of the Faculty of Medicine at Paris.*

When a therapeutic fact is isolated, it possesses in general no value; but when the curative action of a new plan has been so evident that it is impossible to doubt its efficacy, when this plan is of easy employment and does not produce the slightest inconvenience, it is the duty of the conscientious physician to introduce it to the attention of his professional brethren.

On Monday, 14th September, 1837, DOG or CHÉRISE did me the honor of requesting my attendance in consultation with Professor CHOMEL and Doctor TONNAY, respecting the case of a young child aged eight years. Our young patient had suffered much for several months in consequence of the second dentition. Towards the close of August of the same year, he had an attack of scarlatina, which was very mild and required only hygienic regulations of the simplest kind. Eight days after the invasion of the exanthematous disease, the child at that time in perfect health, requested permission to take a walk in the garden of the Thuilleries. The weather was warm and the request granted.

At first no injury resulted, but the third day afterwards the weather became suddenly cold—the child took cold and the following day the face was somewhat swollen, especially in the region of the parotid gland.



An œdema, not however considerable, took place promptly in the entire body. At the same time the urine was suppressed for sixty-two hours, and was afterwards discharged only in small quantity and of a deep brown colour. But as the patient lived near the Thuilleries, he was frequently conducted to the garden for the purpose of recreation. The œdema had somewhat diminished on the 10th September, and in the evening the patient complained of a slight pain in the head. He passed a restless night, and on the following morning complained of a violent cephalgia and manifested an unusual loquacity.

At 3 o'clock P. M. he was seen by M. CERISE, who observed in the patient so extraordinary an appearance and a pulse so irregular, that he remained in attendance three quarters of an hour, anxiously watching the progress of the symptoms; when suddenly, the child felt a very intense pain in the head, carried his hand to the part with a cry of agony, and experienced a violent epileptiform convulsion which continued only a few moments and was followed at first by stupor and afterwards by a true delirium: it was then 3 3/4 o'clock.

M. CERISE applied immediately 10 leeches behind the mastoid process, and covered the arms, the legs and the entire abdomen with large sinapisms. At half-past 4 o'clock another attack more violent and longer than the first, occurred. At quarter-past 5, a third epileptiform paroxysm. At three-quarters past 5 o'clock, a fourth convulsion which remained continuous.

M. CHOMEL had named 9 o'clock P. M. for the consultation, but as the symptoms became more serious I was sent for in haste. It was quarter-past seven when I saw the young patient. He was stretched upon the bed, the head carried forcibly backwards and towards the right side, the jaws, the eye-lids, the eye-balls, the muscles of the neck, the arm and leg of the right side, were agitated with convulsive movements of a most frightful kind.—The muscles of the left side were in a state of complete relaxation. The head had been covered with ice, but the convulsions continued, cold water had been distilled in the face, a handkerchief wet in iced water had been applied to the cheeks, but the symptoms were not moderated. The pulse, however, acquired an extreme frequency, 160 per minute, and was tumultuous.—The respiration was embarrassed and rattling, it was evident that an engorgement was taking place in the lungs and that the bronchial tubes were beginning to be filled with a spumous fluid.—The pupils were excessively dilated. In this conjuncture I proposed an affusion of cold water, to continue only half a minute, which was administered, the child having been placed naked in a bathing tub.

No change ensued. The child was enveloped in a blanket, put in bed and supported in a sitting posture, so as to keep the head in an elevated position.

This convulsion had continued two hours, it seemed to us that life would soon be extinguished, when I conceived the idea of preventing the blood from passing to the brain by some mechanical means—and the only mode was that of compressing the primitive carotids upon the side of the trachea.

It will be recollected that the convulsions existed on the right side. By a negligence scarcely excusable in such urgent circumstances, I compressed the right carotid. The convulsions continued, and the compression had been made two minutes when I perceived my error. I placed immediately the index finger upon the left carotid, and before fifteen seconds had elapsed the convulsions ceased suddenly and the child fell into an apoplectic stupor. The compression was continued one hour without interruption, and not the slightest convulsion returned. The respiration, previously rattling and stertorous, became more and more regular and in a quarter of an hour was performed silently. After half an hour the child opened his eyes, and the pulse had fallen to 116. The patient gave signs of intelligence, by attempting to answer questions that were proposed. The sensibility was evident on all the left side of the body, but very obscure on the right; no lesion of the muscular movements on the left side, but on the right the paralysis was complete. The pupils had returned to their normal state. We determined that compression should be continued through the night; that a drop of Croton oil should be administered to produce a derivation to the abdomen, and that cold water should be used as a beverage. We tried however the effect of remaining a minute without compressing the vessel; the compression was then renewed for ten minutes, suspended anew for ten minutes, renewed for ten, suspended for five, renewed for ten, and we then allowed a repose of a quarter of an hour. At half past 11 P. M. consciousness and voluntary motion had been restored. The child would not permit any further compression of the vessel, and demanded drink and food with a vivacity which evidently indicated delirium.

The patient slept during the night, but with some restlessness. The convulsions did not re-appear. The next morning there was still some degree of loquacity, but the cerebral excitation ceased during the day and the convalescence proceeded without interruption.

REMARKS.—The influence which the compression of the carotids exerted over the convulsions in this case cannot be doubted. The spasmodic movements had continued two hours, and by the compression they ceased in a few seconds as evidently as the same mean would have arrested an arterial hemorrhage.

Let us endeavor to specify the cases to which this plan will probably be applicable. I believe that it will prove useful in

all cases of *congestive convulsions*, meaning thereby all those convulsions which have for their cause only an afflux of blood towards the brain. I do not believe in the efficaciousness of the plan in those convulsions which depend upon an effusion of blood into the cerebral substance upon ramollissement, or laceration or contusion of the brain.

The congestive convulsion (and, under this head we include the eclampsia of women in parturition, that of dentition, that which often attends the incipient stage of the acute diseases of infancy) the congestive convulsion, we say, has for its anatomical characters an engorgement of the cerebral vessels, a slight infiltration of the pia mater and effusion into the ventricles; it may indeed happen that the cerebral substance may be lacerated, that effusions of blood may take place in the medullary substance, that the parenchyma and membranes of the brain may be inflamed; but these accidents are only secondary in the cases of which we now speak and will be averted if the congestion be prevented.

The compression of one of the primitive carotids produces anemia (?) in the corresponding hemisphere of the brain much more rapidly and certainly than blood-letting or an application of leeches, and if it be continued for some time the cerebral circulation will be almost entirely annihilated, and the local irritation which caused the sanguineous afflux will be extinguished by the absence of the blood, without whose stimulus every fluxionary irritation must cease. We may remark also, that if the cerebral congestion be the cause of the convulsion, the convulsion becomes of itself a cause of the congestion with this difference, that the congestion is active in the first and passive in the second case.

The compression of the carotid prevents then in the first place, the primitive active congestion, and opposes still more efficaciously the secondary passive congestion.

The immediate effect of this compression in a healthy person is very remarkable. The face becomes pale, a sensation of chilliness is experienced, and sometimes a certain perturbation in the intellect occurs,—these disappear as soon as the blood is permitted to resume its course to the brain.

Hitherto we have spoken only of the compression of one of the carotids. Indeed, it will not be necessary in general to interrupt the cerebral circulation except in one of the hemispheres; for we know that convulsions, even epileptic convulsions, affect almost always only one side of the body, the other side experiencing only very slight convulsive movements. But if both sides of the body were equally convulsed, together or alternately, would there be any inconvenience in compressing at the same moment both of the primitive carotids? By making the exper-



iment upon ourselves we may be easily convinced that the simultaneous compression of the two carotids will not be attended by the inconvenience which we might at first apprehend. The experiment should be made while we are in the horizontal position. Vision becomes obscure, the ideas are somewhat confused—an indefinable sensation of nonentity, but by no means threatening life, is experienced: by degrees these phenomena cease, because the anastomoses enable the vertebral arteries to supply the brain with sufficient blood for the maintenance of its functions.

We should not then fear to compress the two primitive carotids simultaneously when necessary. It is not however necessary to do this immediately, and it is better to compress at first only the vessel of the side opposite to the one in which the convulsions are most violent, and interrupt the circulation a few minutes afterwards in the other hemisphere.

It may not be necessary to mention the place where the compression should be made. I prefer the interval between the sterno-cleido-mastoid muscle and the side of the larynx; for at this point the artery is free and may be easily reached and pressed against the anterior surface of the vertebral column, and if the artery should divide lower down the neck than it usually does, into the two principal trunks, no inconvenience would hence arise, as the internal carotid would then be compressed and the same effect produced. The compression should be made with the thumb or with the index and middle fingers united, the finger is placed parallel with the axis of the vessel or perpendicularly, the palm of the hand turned outwards so as not to press upon the larynx or trachea. We should commence by ascertaining the situation of the vessel by means of its pulsations, and it should then be pressed gently against the vertebral column, taking care that it does not escape from the finger.

I may ask if in acute hydrocephalus of infants, if in the incipient stage of cerebral inflammation, the compression of the carotids would not cure these terrible diseases? I would not be rash enough to advise the ligation of the carotid in an epileptic patient, whose life might be threatened: but if I were afflicted with this horrible disease, I would certainly demand the operation for myself—When a surgeon is applauded for applying a ligature around the carotid for the purpose of curing a tumour of the orbit, he should not be accused of rashness if he were to employ the same operation for the cure of epilepsy. This is what I have to say respecting the compression of the carotids in the treatment of convulsion. I hope sincerely that the plan may succeed in the hands of my professional brethren, for it is simple, of easy application, without inconvenience and does not exhaust like the energetic treatment to which children and women who have attacks of eclampsia, are generally subjected.

If by subsequent experience the utility of this plan be established, it will be a happy triumph in therapeutics : if it be proven to be inefficacious, those who employ it will have no cause of regret, as the patients will not be thereby injured.—*Journal des Connaissances Médico Chirurgicales.*

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*Ectopia of the Aorta—reported by M. KEY, of Bordeaux.*

In the following case the aortia arises from the right ventricle, the pulmonary artery is nearly obliterated, the two ventricles communicate, and the brachio-cephalic trunk is inverted.

A little girl 9 years of age, born of young and healthy parents, was brought from the village of Charente to the hospital of Bordeaux. The skin of the whole body, as well as the conjunctiva and clerotica, presented a decided blue hue, and the nails and lips a deep blue colour. By auscultation the heart was found to beat against the sternum like a hammer; the pulse was small and not of a strength corresponding with the action of the heart. The chest was well developed, sonorous on percussion, though respiration was laborious and attended with constant anxiety.—The child was extremely irritable and provoked to violent passion by the slightest causes, during which suffocation seemed imminent: indeed it was in one of these paroxysms, shortly after her admission to the hospital, that the patient suddenly died, as though some mechanical cause had arrested circulation and respiration.

The most remarkable peculiarities revealed by autopsy relate to the heart and its vessels. It should be observed, however, that the accumulation of blood in the cerebral vessels was sufficient to have induced a true case of congestive apoplexy. The lungs did not seem to be developed proportionably to the volume of the heart; they had been however, when examined, sometime macerating in alcohol; they were engorged and did not crepitate.

The volume of the heart was greater than usual at this age; its globular form assimilated it to that of the heart of a Chelonian; the inter-ventricular groove was less oblique than usual; its weight four ounces; the auricles presented nothing peculiar. There was no trace of the foramen ovale, save the slight depression termed the fossa ovalis, and which was more evident in the left than in the right auricle. The right ventricle was somewhat globular, not collapsed, and presented an excentric hypertrophy of its walls, the thickness of which, at the base, was four lines.\* Its columnæ carneæ were so much enlarged as to re-

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\* The thickness of the same region in an adult heart is usually about 2½ lines.

semble those of the left ventricle. The auriculo-ventricular orifice was natural, and gave attachment to a normal tricuspid valve. The aorta and pulmonary artery arose from the anterior and superior part of the right ventricle. The aorta very singularly arose from the left side of the right ventricle, and at about the place of the usual origin of the pulmonary artery; it passed over and compressed the pulmonary artery, carrying this vessel to the left; it projected posteriorly an inch and a half, and then descended along the left side of the spine; its orifice was supplied with the semilunar valves. The order in which the branches were given off by the arch of the aorta was inverted, so that the innominata was situated to the left, the right carotid and subclavian having distinct origins.

The pulmonary artery originated in the right ventricle, and was so much inclined to the left that it seemed, at first sight, to come from the interventricular septum. This vessel was nearly obliterated at its origin in the ventricle,\* presenting a diameter of only a line; it was surrounded with irregular calcareous calculi. Its sigmoid valves were found above the narrowed orifice and placed one above another; at this point the vessel resumed its dimensions, but did not exceed the femoral. Its internal and middle coats were softened and of a dark red colour; it contained coagulated blood, and presented manifest evidences of arteriosis. This artery bifurcated as usual. No remains of the ductus arteriosus existed.

The left ventricle appears to have diminished in muscularity in proportion to the increase of the right side, though its capacity exceeded that of the right; its auricular aperture and mitral valve were normal; its columbæ carneæ small; and no aortic opening perceptible. An oral aperture existed in the upper part of the ventricular septum sufficiently large to admit the little finger. The circumference of this communication between the two ventricles was polished, indicating its congenital origin, and precluding all idea of an accidental or pathological perforation.

*Archives Générales, T. 11, p. 426.*

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### Phrenology.

This name means, in strictness, the doctrine of the mind, and is far more applicable, according to the principles of nomenclature, to metaphysics in the sense of some of the disciples of the

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\*This obliteration led to the examination of the bronchial arteries, which were found not to be increased in caliber.



Aristotellian school, than to the eminences and depressions of the brain or of the cranium. But the brain, being the grand nervous centre, derives a capital importance from being at once the seat and organ of the mind, so far as the location of this important constituent of man can be determined, and so far as physics are concerned in its existence and operations. As such, this organ, anatomically and physiologically considered, is worthy of the strict attention of medical men. We have however, but limited means of locating the intellectual nature or constituent of man. They seem to be limited to a few facts—some positive, and others negative. These are mainly that the entire absence of brain is always accompanied by an entire want of intellect—that important lesions of this organ are often attended with intellectual impairment—that the detectable existence of intellect declares the existence of brain, &c. But the law of this relation does not prove itself by working proportionably to the amount of each; for the intellect, and this part of the organization, ranking mind with matter, are not always, nor even generally co-ordinate. Nor does it prove itself by displaying an adaptation, each to the other; for imperfection of intellect does not necessarily imply an obvious or ascertainable organic lesion of the brain, as that does often appear without any detectable existence of this. And if the existence of organic lesion is not obvious or ascertainable, we have not the right to suppose its existence.—Nor do even very considerable lesions of the brain always declare impairment of intellect. We are authorized by pathological as well as healthy anatomy, to assert that the vital importance of the existence and integrity of the brain to the animal economy, is not so definite and invariable as may be generally supposed; as we have seen the human being live, pulsating and breathing sufficiently for the perpetuation of animal life for many hours, without one atom of cerebrum, cerebellum, or of the rachidian bulb; but at the same time, without the least manifestation of intellect;\* whilst again, we have seen that some of the

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\* A case of anencephalus, noticed sometime since in this journal, which lived 27 hours, in the possession of all the natural powers, so far as could be ascertained except the intellectual. And RIBES notes a case of the same kind, which was seen by BAYLE, which lived a week.

most severe wounds of the brain have not, of themselves, been accompanied by immediate intellectual impairment.\*

But it is not our purpose on the present occasion to enter upon a dissertation on the anatomy or the physiology of this important organ whose good condition is generally essential to the well-being of the economy. We think it a subject for regret that the former name under which Dr. GALL commenced his investigations has not been retained. With the aid of physiognomy, it might have been used, under the name of *craniology* in peddling around the country the pretended fortunes of the weak who are always ready to bestow their confidence on any novelty, and reward it with their (often) scanty means; without prostituting a good nomenclature. And moreover, the assertions of *cranial* depressions, eminences and magnitudes, would have been truth; whereas, we have seen beyond all fair controversy,

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\* Case of HENRY SINGLETON, a soldier, who in one of Gen. Floyd's battles, received a ball nearly as large as that of a musket, just above the right ear, through the squamous portion of the temporal bone, which passed obliquely backward and to the left, through the middle of the cerebrum and lodged against the parietal bone of the left side. This man suffered no other sensible impression than a feeling of percussion, which he thought was from his own gun, as it occurred at the moment he attempted to fire. He staggered a little out of line, but resumed his place instantly and obeyed promptly the next quick command, or rather the latter part of the command to fire and charge the enemy. He ran in the charge many paces and returned; never having suspected he had been shot, until subsequently, when his companion, observing a little blood about his ear, told him of his wound. He then retired to the hospital for dressing, and the surgeon general, on examining the wound *superficially* on account of the absence of all severe symptoms, pronounced it a "spent-ball wound" and dressed it slightly, or not at all. He remained however on the list of wounded until the measles appeared on him some ten or fifteen days after the battle, from which he recovered about three weeks after the wound was received; neither himself nor his surgeon ever having doubted but that the ball had fallen without entering the cranium.

After his recovery from the measles, the campaign being near its close, and his health appearing to render him unfit for immediate service, he rode on horseback to the interior, a distance of 150 miles, exposed to rain, high waters, &c. After getting home, he soon became feverish as from a recent cold, and a measles-like eruption again pervaded his skin. His febrile symptoms increased for a few days and abated. After being discharged from a convalescent for this attack, he became subject to partial cramps in his feet, which finally extended to the legs and to the whole body, and he died, some weeks after his return. In the examination after his return, and during his treatment for cramps, a probe was several times passed freely, without the least resistance, following the opening made by the ball through the brain as far as the probe could reach, without sensation of any kind.

in Dr. SEWALL's second lecture, as well as elsewhere, the inapplicability of the external *cranial* marks (and none but the external can possibly be available for practical purposes,) to the end of determining with the least certainty the *cerebral* mass or its proportional part—saying nothing of the unsoundness of the notion of a proportionate relation between certain intellectual faculties or animal propensities, and the cerebral developments.

On this subject, the common sense views which would avail much in regard to any matter not quite so well calculated to titillate the fancy or the vanity, have been again and again urged by the friends of truth; but these cannot avail much in the face of that "self esteem" which prompts almost all men and women to desire to hear some comment on their peculiar virtues, acquirements or prowess. Whilst this subject rested as a mere quere, whether or not, phrenology was a science? it was a matter of little consequence whether any one believed the one or the other opinion. It was a mere physiological question, very abstract from medical practice or therapeutical utility, and its decision not calculated to damage any one. But when taken up as a *practical* science and retailed around the world under the declaration of its being a fair "mirror of nature" in which men and woman may see reflected their animal, moral and intellectual faculties, and thus for the purpose of draining from a confiding community who cannot be supposed to know any thing of its inapplicability to the truths of nature, an unfair support from their well-earned competence, it is time for the community of our country to open their eyes to the imposition practiced on them, and be brought to see the grossness of the insult which is offered to their understandings. But common sense will, sooner or later, bring out the community on the side of truth.

We have been led to these remarks, on the present occasion, by noticing in the last No. of the Med. Chirug. Rev., p. 507 and following, an extract from the facts about to be published by Dr. LELUT\* on the subject of the average and the proportionate weight of the human brain, and its relation to the development of intelligence. The following facts relative to the cerebral mass, are a part of the contributions to the work of LELUT, as in-

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\* *NOUVEAU'S Rapports du physique et du moral.*"



serted in a late No. of the Gazette Medicale de Paris. We copy from the Med. Chirug. Rev. for October 1837. Dr. LELUT has neither declared himself an advocate or an opposer of Phrenology. Several useful views may be taken of these facts to which the truth must ultimately bow, after the intoxicating charm of novelty shall have subsided, and the ridiculous tricks of gliding over the palpable incompatibilities of the doctrine shall have become old things. These views are, the smaller average of the female brain, the equality of the encephalic mass in ingenious accomplices in high crimes, and the speechless and absolutely senseless idiot, &c.

"The average weight of the encephalon (including the cerebrum, cerebellum, and tuber annulare or rachidian bulb,) after the meninges have been stripped off is, in the healthy adult male about 1346 grammes, or three pounds and a half,\* of which the cerebrum weighs 1170, and the cerebellum 176 grammes. In the female the weight of the encephalon is about 1-13th less than in the male. The following are the measurements of the encephalon in certain individuals, "dont la triste célébrité a jeté quelque jours sur leur psychologie."

1. Lhuissier, who murdered his mistress, and then cut the body up and threw the pieces into the Seine. Intelligence below the ordinary standard, and not cultivated—45 years of age—middle stature.

The encephalon weighed	-	1496 grammes.
cerebrum	- - -	1305
cerebellum	- - -	191

2. Belard, murderer of one of his relations; a tradesman in the Temple. Intelligence below the ordinary standard, and not educated—29 years of age—middle stature.

The encephalon weighed	-	1290 grammes.
cerebrum	- - -	1130
cerebellum	- - -	160

3. Bardon, an accomplice in a murder. Intelligence ordinary, and not cultivated—39 years of age—midd. stature.

The encephalon weighed	1384 gram.
cerebrum	- - 1204
cerebellum	- - 180

4. Chandelet, the assassin of his uncle; a porter in the Rue de Charonne. Reason lively and exalted; propensities brutal and licentious—31 years of age—stature short.

The encephalon weighed	1192 gram.
cerebrum	- - - 1010
cerebellum	- - - 182

\* An English pound of avoirdupois weight is equivalent to 423 grammes.

5. Avril, the accomplice of the notorious Lacenaire. Intelligence ordinary, and not cultivated—27 years of age—middle stature.

The encephalon weighed 1310 gram.

cerebrum - - - 1130

cerebellum - - - 180

6. David, murderer of his sister-in-law, who was the wife of a servant at the Hôtel des Invalides. Intelligence ordinary, but somewhat eccentric, and partially cultivated—34 years of age—stature rather tall.

The encephalon weighed 1420 gram.

N. B. It has been preserved in spirits, and the weight of the cerebrum and cerebellum, separately, cannot be stated.

7. Fieschi. Intelligence ordinary, but not cultivated, but active and proud—46 years of age—middle stature.

The encephalon weighed 1365 gram.

cerebrum - - - 1200

cerebellum - - - 165

8. Guerin, accomplice of Chandelet (No. 4). Reason rather acute, developed, and somewhat educated—42 years of age—stature rather tall.

The encephalon weighed 1384 gram.

cerebrum - - - 1240

cerebellum - - - 145

9. Lemoine, the assassin of the chamber-maid of Madame Dupuytren. Intelligence developed and cultivated—40 years of age—middle stature.

The encephalon weighed 1310 gram.

cerebrum - - - 1140

cerebellum - - - 170

10. Lacenaire. Intelligence developed and cultivated—34 years of age—stature short.

The encephalon weighed 1355 gram.

cerebrum - - - 1205

cerebellum - - - 150

*Remarks.* If we cast our eye over the preceding ten measurements, it will be seen that the medium or average weight may be stated, as we have said at first, at about 1340 or 1350 grammes. The heaviest on the list is that of Lhuissier (No. 1), and the lightest is that of Chandelet (No. 4); the former weighing 1496, and the latter only 1192 grammes.

If we endeavored to establish any relation between the mental development or character of these criminals, and the weight of their encephala and of its two great divisions, it might be remarked that Bardon, Lhuissier and David, in whom the encephalon or the cerebrum was the most heavy, were not the most

intelligent; that in Lacenaire, on the other hand, the brain weighed considerably less than in them, and that if in Chandellet, with his brutal passions, the cerebellum was large, the cerebrum weighed as low as it does in many idiots, and yet he indicated no want of intelligence.

But we have no intention to discuss this most difficult question, as we most willingly admit that a number of considerations ought to be taken into account, in such an enquiry. It might, for example, be objected that we have not sufficiently attended to the size and weight of the whole body in reference to the weight of the encephalic mass: nor to the relative weights of its two great parts, the cerebrum and the cerebellum; nor to the education of the individuals; and, even if we were provided with accurate data on these topics, phrenology might then step in, and remind us that we have forgotten to attend to the comparative size of the different convolutions; and, then supposing that we had done this, that we have neglected to take into account the temperament of each individual, and the activity of the cerebral functions.

Our intention therefore at present is only to afford accurate observations of what we ourselves have examined and ascertained; and we now, in pursuance of this plan, shall proceed to give some other measurements of encephala, such as we have found them in idiots and lunatics.

1. Gobinot, 24 years of age, and of middle stature. *Idiotism of the lowest grade*; no power of speech, but only inarticulate sounds and cries. He seemed not to have even the natural instinct of hunger, and would not eat, unless induced to do it.

The encephalon weighed 1320 gram.

cerebrum - - - 1135

cerebellum - - - 185

2. Inconnu, deaf and dumb, 43 years of age, and of a stature somewhat above the ordinary. *Idiotism of the lowest degree*. No speech, and scarcely any sign of intelligence.

The encephalon weighed 1370 gram.

cerebrum - - - 1205

cerebellum - - - 165

3. Darvoz, 39 years of age, and of middle stature. *Idiotism which places the individual below the brute*. No speech; sensations dull; a slight degree of memory; incapacity of clothing himself, or of defending himself against any external injury.

The encephalon weighed 1256 gram.

cerebrum - - - 1064

cerebellum - - - 192

4. Courtois, 46 years of age, and of middle stature. *Idiotism of the lowest degree*. Physiognomy almost simian. Incapable of answering to any question, or of taking care of his person.



The encephalon weighed 1045 gram.

cerebrum - - - 907

cerebellum - - - 138

The anterior cerebral

lobes - - - 226

5. Boulot, 37 years of age, stature rather tall. *Idiotism of a very low degree.* The intellect is almost quite abolished; to all questions he answers, "ma tete, mon front sont egarés," or "dans la province de Joiny, ou a fait de moi un pauvre fou pour me perdre." He is often much excited and very turbulent. He has no regard to his animal feelings, and his life is almost entirely vegetative.

The encephalon weighed 1380 gram.

cerebrum - - - 1188

(its anterior lobes) 192

cerebellum - - - 300

6. Rollet, 46 years of age and of large stature. *Idiotism very confirmed.* His intelligence was almost at zero. He said, for example, that he was only three years old, and it was only with extreme difficulty that he could pronounce a few words. His physiognomy was quite idiotic. He was employed at the Bicetre to turn the wheel of the great well there.

The encephalon weighed 1025 gram.

cerebrum - - - 896

(its anterior lobes) 250

cerebellum - - - 135

7. Cresson, 23 years of age, and of large stature. *Imbecility very strongly marked.* Speech embarrassed and stammering—physiognomy dull and heavy; although capable of manual work, never could be taught any art.

The encephalon weighed 1105 gram.

cerebrum - - - 920

cerebellum - - - 185

8. Mallebranche, 54 years of age; stature rather tall. *Idiotism quite confirmed.* Speech scarcely intelligible. Extreme chorea of all his limbs.

The encephalon weighed 975 gram.

cerebrum - - - 825

(its anterior lobes) 240

cerebellum - - - 150

9. Favelle, 57 years of age; middle stature. *Imbecility with irregularity of muscular movements.* He was admitted into the Bicetre as an idiot at the age of 12; and the only work he was enabled to do, was to assist in turning round the wheel of the well. His speech and his walk were embarrassed and difficult. His arms were in a constant trembling. His intelligence was correct, but very inconsiderably developed.

The encephalon weighed 1235 gram.

cerebrum - - - 1077

(its anterior lobes) 300

cerebellum - - - 158

10. Chamblin, 67 years of age, middle stature. *Imbecility only partial.* He was never however, able to gain his livelihood by any occupation ; and, in consequence of this, he was put into the Bicetre at the age of 24. His intelligence was very small, but correct as far as it went. His speech was stammering and uncertain. Being capable of considerable bodily exertion, he was employed at the hospital to assist the servants in various ways.

The encephalon weighed 1365 gram.

cerebrum - - - 1215

cerebellum - - - 150."

Phrenology in the vulgar sense teaches that the brain is the organ of the mind, and that "in proportion to the volume of the organ, other things being equal, will be the power of mental manifestations." That the organic developements arise from the medulla oblongata, and radiate to the surface ; and that there is, in the source of these developments a congenital tendency to impart a vigor of growth in these several organs, which will in future manifest by their size the grade or power of mental developement, whether of propensities, sentiments or intellect.

It follows therefore as an unavoidable consequence, the legitimacy of which is not to be slipped over by phrenologists, that when all these sub-organs progress on, so as to afford an unusual developement of the whole assemblage of any one, or of all of these classes of functionaries, the faculties of these mental functionaries are consequently and proportionably developed. That is to say, if one developement be large or full, it indicates the possession of an unusual natural faculty of that name ; as for example No. 11, or "love of approbation." But if No. 12, or "cautiousness" be also unusually developed, it cannot destroy or impair the former, but leaves it with all its powers or merits, adding to the mind eminent "cautiousness." So of "conscientiousness," "ideality," "hope," and so forth to all the cerebral developements ; each not actually impairing the former, but adding to it another and another, until the whole assemblage of mental developements, including "propensities," "sentiments" and "intellect," are brought up to an unusual dignity—an integral organ which must needs partake of the whole

nature and degree of its numerous integrant constituents. There appear to be but few fundamental propositions proper to this doctrine, the others being simply anatomical or physiological facts, which cannot, of themselves, sustain the superstructure. Those fundamental principles however, which must exist to make phrenology a practical science, are the following:—

1st. The shape of the skull must precisely correspond with that of the contained brain, in order that the size and shape of the brain itself may be at once absolutely determined by ascertaining those of the skull.

2nd. The larger the brain, the greater must be its powers, *without* temperament being held as a modifier.\*

3rd. The more active an organ is, the more conspicuously will it be indicated by the cranial protuberance supposed to cover it; or, in other words, the more exalted the cranial protrusion, the more active will the faculty be found which it is supposed to cover. These are indeed necessary to its support; they are its chief fundamental propositions; for unless they be true, there is no foundation to the science as a practical one.

The unsoundness of the first and second have been abundantly proven by Dr. SEWALL's second lecture. As to the modifying influence of temperament, this belongs to Physiology, abstractly from Phrenology. It belongs to natural language, if we may so speak; being that by which individuals may discern the taste, disposition, propensities, &c., as if by intuition. It belongs also to Physiognomy, with more propriety, for this has an earlier claim to it. It is a *petitio principii* to say that the state of the body always corresponds with the quantity of the brain. It cannot therefore be allowed in support of Phrenology as a practical science. It must therefore remain unmolested with the rest of Physiology, or be yielded up to Physiognomy; a thing which has had its great day, passed its age of novelty and delusion, and is now settled down to the proper level of its own intrinsic merits. To the 3rd of these fundamental propositions, we apply the stubborn facts of anatomy, cerebral statics, and their necessary bearing on psychological physiology. This must end in the total subversion of this proposition, and in establish-

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\*Temperaments are a separate part of science, and are therefore unjustly brought in to aid phrenology and head its deficiencies in fortune-telling.



ing the fact, that there is indeed no fixed relation available for practical purposes, between the cerebral developments and the mental faculties and propensities.

It will be borne in mind that the average nett weight of the healthy, ordinary, adult encephalon, (including the cerebrum, cerebellum and rachidian bulb) is

1346 grammes.

The cerebrum of which is 1170

cerebellum - - - 176

The first case given by Dr. LELUT was, in point of intelligence *below the ordinary standard*, without cultivation, and the person of medium stature. In this

The encephalon weighed 1493, *more* than com. av. 156 gram.

cerebrum - - - 1305, - - - - - 135

cerebellum - - 191, - - - - - 15

The second case, guilty of the same crime, both being murderous, the same grade of intelligence, being *below* the ordinary standard—person the same, being of medium stature.

The encephalon weighed 1290 *less* than com. av. 56 gram.

cerebrum - - - 1130 - - - - - 40

cerebellum - - 160 - - - - - 16

Now, if we add the deviations both ways, above and below the standard of the cerebrum, the great seat of intelligence and sentiment, we have 175 grammes difference in the weight of the cerebrum of individuals of the same known character of mind, stature, and so forth. We are indeed not told the temperaments in these cases, but can no more allow the practical phrenologist to say that in one, the temperament was of one kind, and in the other, it was the opposite, merely because the brains were so different, than we could grant him gratuitously the main thing he wishes to establish. It was as well to grant him one *petitio principii* as another.

In the 3d case—Intelligence *ordinary*—medium stature.—Here the difference from each of the others is, that the intelligence is *ordinary*, instead of being *below* the ordinary standard. Crime the same.

The encephalon weighed 1384, more than ord. average 38 gm.

cerebrum - - - 1204, - - - - - 34

cerebellum - - 180, - - - - - 4

Here all the developements of the brain were over ordinary, particularly the intellectual, 34 grammes; still the intellect was *ordinary*.

In the 4th case the *reason* of *Chandelet* was *lively* and *exalted*—the propensities *brutal* and *licentious*—stature short. In such a case can we expect from Phrenology that

The encephalon will weigh but 1192, less than the aver. 154  
cerebrum, with lively and

*exalted reason*, - - - 1010, - - - - - 160

and the cerebellum - - - - 182, more than ord. av. 6?

Remark here that the *lively and exalted reason* of the individual *Chandelet* has the extreme opposite in the organ to which it belongs, whilst his brutal and licentious passions have a development of cerebellum of only 6 grammes above the ordinary average; the first fact, (and but a nominal one, as it is only 6 gram.) in favor of this proposition of Phrenology.

We will now place by this case, *Guerin*, the accomplice of *Chandelet*, which is the 8th case of LELUT. These persons were engaged in the same crime, that is to say the assassination of the uncle of *Chandelet*. The *reason* of *Guerin* was *acute* and *developed*, stature rather tall, and it is fairly presumable from the peculiar crime in which they were concerned, that their real sentiments and powers of mind generally, as well as their propensities, were very similar. But instead of 154 grammes less than the ordinary weight of the encephalon, *Guerin* had 38 more, making a difference in their whole brain of 192 grammes. And instead of the 160 less of cerebrum, as with *Chandelet*, *Guerin* had 70 more, making a difference in the organ containing the reasoning faculties of which both might boast, of 230 grammes. And instead of the 6 grammes more of the cerebellum which contains the brutal and licentious propensities, which *Chandelet* had, *Guerin* had 31 less, which, added to the 6 more of *Chandelet*, makes a difference between them in this organ of 37 grammes.

We leave to the reader to make the same observations for himself on the remaining 5th, 6th, 7th 9th and 10th cases, as they continue to illustrate the severe truth, that the *assumptions* of practical phrenology are not the *science of nature*.

Dr. LELUT next gives ten cases of idiots. In the first, the encephalon was 26 grammes less than the average. *Idiotism* was of the lowest grade—no speech—and without even the

natural instinct of hunger, whilst his cerebrum was only 35 grammes *less than average*.

The 2d case was one of *idiotism* of the lowest degree. No speech, and scarcely any sign of intelligence.

Encephalon 24 grammes *more* than average, and cerebrum 35 *more*, whilst the cerebellum was about 11 *less*.

We here take leave of the subject, leaving the reader again to examine the remaining eight cases of idiocy and compare them with the ordinary average. He will find some above and some below ; but the average of the idiots' heads given, is rather below; proving the proposition with which we set out to review this table, that "*there is no fixed relation available for practical purposes, between the cerebral developements and the mental faculties and propensities.*" Whilst therefore, the subject is one which should be freely and fully investigated, in physiology, whilst physiological speculations should be as free on this, as on any other subject, and whilst, like the "language of flowers," it may be admissible for amusement in the parlour, and whilst its doctrines may, without impropriety, be thrown before the public for their investigation ; still not being consistent with the truths of nature, and consequently not being founded thereon, it is *morally wrong* for it to be applied to the purpose of gain, by its practical application for the end of divining or foretelling the intellectual or other fortunes of a mixed community, whose ignorance of a study so much out of their way as the anatomy and physiology of the brain stands as a barrier to their judgement on its truth or falsehood.



## PART III.

MONTHLY PERISCOPE.

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Nothing is received with more grateful salutations by the practitioner who duly feels the burthen of humanity, than the knowledge of efficient remedial means for those dangerous diseases over which he has been obliged to weep with folded arms, or exert himself often in the face of despair. The cheering influences of hope are cast around him by even a solitary fact which creates confidence in something, for the benefit of humanity, which has not before been found unworthy of confidence.— But we call the attention of the reader to the following subject on more substantial grounds than the mere fact of its success in the treatment of one case. Reason has suggested and fact demonstrated its proportionate adaptation to the etiology and pathology of the cases for which it is believed to be a remedy; and its physiological action or influence is calculated to substantiate the opinion formed of its efficacy. In short, it is consistent with all the philosophy of the cases to which it is proposed to be applied as a prophylactic or as a remedy. The subject to which we allude is the communication of M. TROUSSEAU, on the subject of the compression of the primitive carotids, as a remedy for certain convulsions; which we have given in the II. part of the present No., from the *Journal des Connaissances Medico-Chirurgicales*.

It will be remarked that the cases to which this remedy is considered applicable are congestive convulsions, or those which have for their cause, an afflux of blood towards the brain: such are a large majority of the convulsions of women and children, as well as the epileptiform, and many of the apoplectic convulsions of men, which we are called to treat. There are no cases which make such sudden and agitating demands on our promptness and immediate efficiency, as attacks of this kind. This remedy has two high recommendations, if accompanied with efficiency; these are its convenience and its safety. We trust that

a profession which is accustomed to writhe under the sudden destructiveness of these cases, will not hesitate to adopt a practice, at once so safe and rational, and report the results for the benefit of the community.

It is most obvious that in the case given by M. TROUSSEAU, compression of the primitive carotids relieved the active congestion most promptly, and then quickly subdued the remaining apoplectic, passive congestion. It should be remarked that both the primitive carotids may be safely compressed if necessary, as the anastomoses will enable the vertebral enteries to afford to the brain a sufficient supply; but when the convulsions are entirely, or mainly on one side, the artery of the opposite side should undergo the compression.

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*New injection for the treatment of Blenorrhagia and Leucorrhæa.* The aromatic tincture of gall nuts is employed with success in the treatment of the above named diseases, in the new hospital, in the *Ren de l'oursine*. It is prepared in the following manner:—

R. Nux. Gallæ contus. ℞. j.

A. Puræ ℞.

Maceriate 12 hours, and decant the fluid; add to the residue another pint of water; and after 12 hours maceration it is also decanted. Add to the liquor 2 pints rectified alcohol and ʒvj. compound alcoolate of citron, and filter.

This tincture, diluted with 6 to 8 pints of water, is used as an injection.—*Jour. de Pharm.—Am. Jour. for Feb. 1837.*

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*Treatment of Fractures.* We find in the *Archives Générales* (Tom. 11, p. 438, 1837,) an interesting article by M. Fleury, on the causes tending to the consolidation of fractures. The writer, after premising that the ordinary treatment consists principally of reduction and retention of the fractured extremities in apposition, remarks that the attention of M. TOBERT has been directed to the state of the circulation in the affected part.

“It is,” observes M. F., “to the blood we should look for the formation of cicatrices; every one knows its influence on the surface of wounds, on the form, colour, consistence, development, and vessels of false membranes. The researches of Du-

puytren having established the correctness of the principle advanced by Duhamel, that the periosteum and cellular tissue are the principal agents in the formation of osseous deposits, it might have been inferred that the circulation was greatly concerned in the accomplishment of this work. Observation has fully confirmed the correctness of these deduction, and proven to M. Tobert that among the causes which oppose the consolidation of fractures, impediments to the circulation and a vitiated state of the fluids should be considered some of the most potent."

Mr. Fleury then expatiates on the evils attendant on the tightness with which the bandages and splints are generally applied to fractured limbs, and cites several cases in which union had been delayed several months under the ordinary treatment, but readily took place on removing the compressing fixtures, and exciting the circulation by stimulating frictions.

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*Auscultation for the detection of Urinary Calculi.* Messrs. Moreau de St. Ludger & Behier had in 1836, proposed to adapt a stethoscope to the handle of the sound in exploring the bladder in search of calculi, but this was attended with some inconvenience, inasmuch as it was difficult to retain the ear well applied to an instrument which it was necessary to move about considerably, especially in striking against the resisting body to detect its sound. M. Leroy, d'Etioles, has recently presented to the French Academy an instrument remarkably well adapted to this mode of examination. It is formed by the connection of the stethoscope and handle of the sound by means of a flexible tube of gum elastic kept open by a spiral wire within. With this simple contrivance the ear may remain applied to the stethoscope, unmoved by the catheter, whose shocks against a calculus will be distinctly heard.

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#### MEDICAL INTELLIGENCE.

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MEDICAL COLLEGE OF GEORGIA. At the late annual meeting of the Trustees of the Medical College of Georgia, several important changes were made in the course of instruction in this Institution. The Faculty of the College consisted of eight Professors; but believing that a reduction of the number would be for the interest of all concerned, Dr. CUNNINGHAM tendered his resignation of the Chair of the practice of Medicine. The trustees, coinciding with that opinion, accepted the resignation; and Dr. FORD, the late Professor of the Institutes of Medicine and Medical Jurisprudence, was appointed Professor of the Institutes and Practice of Medicine.



An exchange of Chairs was then made between Dr. NEWTON, late Professor of Physiology and Pathological Anatomy, and Dr. DUGAS, late Professor of Anatomy; whereby Dr. NEWTON was made Professor of Anatomy, with the duties of Demonstrator; and Dr. DUGAS, Professor of Physiology and Pathological Anatomy. The Faculty therefore now stand as follows:—

Dr. L. D. FORD, Professor of Institutes and Practice of Medicine.

P. F. EVE, “ “ Surgery.

G. M. NEWTON, “ “ Anatomy.

J. A. EVE, “ “ Materia Medica and Therapeutics.

M. ANTONY, “ “ Obstetrics and Diseases of Women and Children.

L. A. DUGAS, “ “ Physiology and Pathological Anatomy.

C. DAVIS, “ “ Chemistry and Pharmacy.

Dr. NEWTON will serve as Demonstrator. By connecting the Demonstratorship with the Anatomical Chair, there will be a free admission of the whole class to the demonstrations, without a separate ticket.

The engagement of Dr. NEWTON's superior abilities in the Demonstratorship, with the abundant supply of materials for which ample arrangements are made, cannot fail to add greatly to the benefits of this Institution, in special and practical Anatomy.

An alteration was made at the same meeting, whereby the term of the course of lectures was reduced to four months, the period announced by the other colleges.—This arrangement will cause the course to commence in future on the first Monday in November, and terminate on the first Saturday in March.

It will be remembered that, several years ago, the Medical College of Georgia proposed to the other colleges in the United States, to meet a convention, for the purpose of adopting certain general regulations and plans for the improvement of the present system of medical education, and elevating the standard of medical science in the United States: but the proposition was rejected by the other colleges; each preferring to maintain its own peculiar views, and establish its own plans of operation for its individual interest. One of the most important purposes which the Medical College of Georgia had in view, was to urge the propriety of establishing throughout the colleges a longer term of annual instruction than had been generally adopted. That College had always acted on their opinion of the importance of this—their course having been six, instead of the common term of from three to four months. But their proposition not being met by the other colleges, the Georgia College found it impossible to compete successfully with the popularity of a short and cheap course with students. If there be error therefore in the adoption of four months as the term of annual instruction, the blame is fairly attributable to the retention of the short course by the other colleges, and to the ridiculous and disgraceful practice of some of them, of boastfully circulating in every neighborhood of the union, statements of the small amount of money required for attending a course with them. We speak freely on this subject, because we have known the truth of such decoying temptations put to the test of experience by some of the most prudent and economical young gentlemen of Georgia, whose parents have been compelled to more than double the amount stated—cases wherein the items of expenditure were faithfully preserved and exhibited in good proof of the true economy exercised.

# SOUTHERN MEDICAL AND SURGICAL JOURNAL.

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## PART I.

### ORIGINAL COMMUNICATIONS.

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#### ARTICLE I.

*Remarks on Fever, more especially that form of it usually denominated Yellow Fever. By J. B. WHITRIDGE, A. M. M. D., President of the Medical Society, and ex-officio, of the Medical College of South Carolina; in reply to certain interrogatories by CHERVIN, D. M. P., a celebrated French Philosopher and Physician.*

The subject was thoroughly investigated by DR. CHERVIN\* for whom the following epistolary essay was prepared, and by him deposited in the Archives of the Royal Academy of Paris, for the use of the French Government.

Although the essay has been some time written, the experience which it embodies and which is confirmed by subsequent observation, may perhaps be useful, and the remarks which it contains, not uninteresting to some of the readers of the Southern Medical and Surgical Journal.

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\* See Pétition adressée a la Chambre Des Députés Par N. Chervin membre titulaire del' Academie Royale de Medicine.

## INTERROGATORIES.

"Have you ever seen any case of yellow fever which originated from contagion ?

"Do you believe this disease under any circumstances, to be contagious ?

"What do you consider to be the most common causes of yellow fever ?

"Have you seen any person attacked with the yellow fever a second time ?

"Do you believe the human frame liable to be attacked with this disease more than once ?"

## TO DOCTOR CHEVIN—

Sir:—Fever is a unit—I have long been of opinion that there are various forms and modifications of fever, or in the language of the illustrious RUSH, that there are various *symptoms* and *states* of fever, but, that there is in fact, but one fever.—Hence the nosological arrangement of fevers, according to their various forms and modifications, is calculated to bewilder the mind and to mislead the unwary.

There are three *forms* of fever, viz: intermittent, remittent and continued: these are subject to various *modifications*, according to circumstances, and constitute what is commonly called tertian, quartan, quotidian, &c. The remittent and continued forms of fever, have also their characteristic symptoms, but which, it is foreign to my present purpose to detail.

There are regular gradations of fever, from the simple intermittent, up to the highest grade of bilious or yellow fever. The latter is not confined to, but is more frequently found in, tropical climates. In the climate of Carolina and Georgia, the human constitution at some period of life, from infancy to decrepitude, is liable to every grade of fever. And these take place, according to the greater or less susceptibility of the subject, or according to the greater or less intensity of the predisposing and exciting causes. Persons accustomed to warm climates, or to the atmosphere of those places which are surcharged with the mephitic gasses, which are principally instrumental in the pro-



duction of the higher grades of fever, are less susceptible than strangers. Persons from high northern latitudes, are more susceptible than those within the tropics. In this climate, Europeans are more susceptible than Americans, and persons from the northern section of the United States are more susceptible than Carolinians. Strangers are much more susceptible than natives, or those who have been long resident. Native children, are more susceptible than native adults.

That modification of fever usually demonstrated *yellow fever*, is what now claims our more particular attention, and this is generally of the *continuous* form.

The yellow fever is not a disease *sui generis*. This then being conceded, there are no diagnostic symptoms by which (in popular language) the yellow fever can be distinguished from other fevers. It can only be known by a strict observance of its symptoms.

The term yellow fever is objectionable, in as much as it does not express that particular modification of fever, which is usually described under that name, nor is a yellowness of the *rete mucosum* a symptom which invariably attends this modification of fever. It depends in a great measure on the mode of treatment pursued. Probably in seven-eighths of the cases which occur, if left to the operation of nature, this symptom would manifest itself; but if an active and vigorous mode of treatment, upon the mercurial plan, were pursued, in seven-eighths of the cases, it would be prevented. The same may be said of the *black vomit*, which is generally considered a diagnostic symptom of yellow fever.

The nosological arrangement of this modification of fever, under the name of typhus icterodes, is also objectionable, in as much as the word typhus, according to the Greek original, implies a disease of low action. If it admitted of any classification, it might with more propriety be arranged under the genus synochus of DR. CULLEN, in as much, as it is a disease of a mixed character, and in the southern section of the United States, generally partakes of the nature of those modifications of fever, which he terms synocha and typhus. As the term yellow fever is familiar to all, and as the symptoms which characterize this modification of fever, are generally well understood, for the sake

of perspicuity, I shall adopt the term, in the subsequent remarks, according to its usual acceptation. The limits prescribed to these remarks, will not admit of my giving a description of the disease, nor is it necessary, as it has been so often and so well described by medical writers.

This being premised, I proceed to answer your interrogations, in as cursory a manner as possible, and

FIRST.—‘Have you ever seen any case of yellow fever which originated from contagion?’

I answer, from the experience of several years practice in the city of Charleston, where the yellow fever has frequently prevailed, no evidence has ever been presented to my mind, to produce a conviction, that the disease is of a contagious nature.—I have often seen persons predisposed to fever, under all circumstances of exposure to the yellow fever,—breathing the deoxygenated atmosphere of close apartments, both day and night,—often in contact with the sick, the dying, and the dead, in the performance of the sad offices of duty or of friendship,—and this too without the least indisposition. To those subjects who are predisposed to the disease, breathing the impure air of a sick room, watching, fatigue and anxiety of mind, especially when conjoined with the debilitating effects of fear,—these may, and no doubt often have proved, the exciting causes of yellow fever. This combination of circumstances, will, in some measure, account for the erroneous opinions of those, who suppose the yellow fever contagious. To those who have any *experience*, the real character of the yellow fever is too clearly developed, ever to be mistaken;—and to those who have not, (if they are open to conviction, and will reason fairly and candidly on the subject,) the facts and arguments before them are incontrovertible.

SECOND.—‘Do you believe the yellow fever under any circumstances to be contagious?’

From the foregoing statement, I certainly cannot believe it to be so under any circumstances; because, if it were contagious, it would be a different modification of fever, or in other words, it would not be yellow fever, but some other fever.

Such, however, is the vague and uncertain use of language, especially in regard to the use of the terms *contagion* and *infection*,—and these, though words of very different signification,

are so often confounded ; in order that I may not be misunderstood, it will be necessary for me here to introduce a few remarks for the purpose of explaining what I understand to be the true import and meaning of these terms, respectively. And this I will do by the adoption of the words of a friend,—an accomplished and elegant writer,—in preference to the employment of language of my own upon this long mooted and vexed question, which I trust, your laborious investigations, your indefatigable exertions, will ere long settle forever.

Is it not remarkable, that the word *contagion*, a word of so frequent use in professional writings, and in books of science, should never have acquired a definite or precise meaning ; that, instead of being stamped with technical precision, as its importance demands, it should so long have been suffered to pass, as a fluctuating and uncertain currency of common language ?

From the indiscriminate use, the words *contagion* and *infection*, *contagions* and *infections*, as applied to diseases, would seem to be synonymous or convertible terms ; yet no respectable philologist, I think, will admit that they really are so. It is true, we cannot resort to etymology, in all instances, for the best authorized acceptance of words ; because long use, or, perhaps it may be said, abuse, often renders that arbitrary. The particular use of words and terms, acquires, in this way, a sort of secondary, and indeed, an absolute legitimacy. But where this has not been fully attained, where words continue to be used in different senses, by different writers, and even by the same writers, at different times, it would seem desirable to limit their technical use, to accord, as nearly as possible, with their radical meaning. But to give technical precision to a term, it will often be found necessary to restrain its meaning, within limits, somewhat arbitrary. Thus, the word *contagion*, in an unlimited sense, might mean whatever, by coming in contact with the body, is capable of producing disease. And as there are probably few diseases which are not produced, either directly or indirectly, by some noxious principle, foreign to the body itself, and applied either to its external or internal surfaces, it would follow that, in this loose sense, a large proportion of our diseases might be said to be contagious. A somewhat similar remark would apply to the word *infection*. Without technical



limitation, it would perhaps, be nearly synonymous with *contagion*; except that the former would convey the idea of a poison mingled with, or attached to, or imbuing some other body. And as *contagion* must be supposed to be generally communicated, through the medium of some body which, in common language, is said to be infected with it, (for a body, in this sense, as well as the atmosphere, may be infected with contagion,) it is not difficult to see the origin of the loose and indiscriminate employment of the terms, *infections* and *contagious* diseases.

But, it appears to me, and I think it corresponds, in general, with the usage of the most correct modern writers, that, to give precision to medical language, *the word contagion should be applied to such poisons only, as originate in a diseased animal secretion; and are capable of reproducing themselves by exciting, in a sound body, the same specific action, in which they themselves originated*; such poisons as were, originally, by Mr. HUNTER, and subsequently by Dr. ADAMS, denominated morbid poisons. *A contagious disease, then, would be such only, as is produced by exposure to those morbid emanations, which are generated by a specific vascular action, in one labouring under a like disease.*

“On the other hand, the term *infection* should be applied, I think, to such poisons as are produced by the changes taking place about inanimate matter, either animal or vegetable, during their decomposition. And the circumstances, which seem most to favour this process, are heat, moisture, and confinement; though the latter may have no further influence than to give effective intensity to the poison. *Infection*, then, differs from *contagion*, in this, that although the former may occasionally arise from animal secretions, such as the matter of sensible, or even insensible perspiration, or from the accumulated filth of numerous individuals, crowded into small and uncleanly apartments, yet there is not, as in the production of contagion, necessarily a morbid vascular action. *Infection* may be constituted by deleterious miasma or poisonous emanations from the surface of the earth, in certain situations; or it may arise from foul matter, at various depths beneath the surface, decomposing under the influence of long continued and intense heat, and thus, more or less extensively, impregnate or infest the atmosphere. So, it

may sometimes be generated locally, as even in an empty hold of a ship, or about the persons and beds of the sick on shore, or in filthy apartments occupied by the sick; yet healthy individuals, from abroad, who sicken by being exposed to such infection, do not necessarily sicken of the same disease as that about which it originated. And of the individuals exposed to it, probably but an inconsiderable proportion will suffer from its influence; the relative number depending on the condition of body, and other circumstances, in which the persons exposed may happen to be, at the time. The same individual, therefore, will contract an infectious disease, by an exposure at one time, which at another, precisely similar in all circumstances external to himself, he had escaped with impunity. Not so with *contagion*, its source is uniform and certain; of whatever kind it is, its origin is invariably a specific morbid secretion; and of those coming within its active sphere, rarely one escapes its specific effect; this too, scarcely influenced by circumstances of health, habit of body, temperature, or climate. It may be remarked, further, that in comparing infectious diseases, all of which are acute in their nature, with that class of contagions, which are also acute, the former appear at irregular and uncertain periods, after exposure to their cause; whereas the latter are, in this respect, uniform and certain."

Under this view of the subject, as well as from my own observation and experience, I do not believe the yellow fever under any circumstances to be contagious.

THIRD.—"What do you consider to be the most common causes of yellow fever?"

In answering this question, I shall divide the causes into two kinds, viz: *remote* and *exciting*, and briefly enumerate the principal. Under the first head, I shall include the *predisposing*, and to the last, I shall add the *proximate*.

A combination of causes generally conspire to produce yellow fever, especially that aggravated form which sometimes becomes epidemical;—these may be divided into two kinds, viz: *general* and *local*. I do not mean to be understood to say, that local causes alone are not sometimes sufficient for the production of yellow fever; but I do say, that a combination of both general and local causes produces a more aggravated form of disease

than either separately, and this combination will generally, perhaps always, be found to exist in large cities and towns, whenever the yellow fever prevails as an epidemick.

The influence of the latter is limited, but the former spreads far and wide.

Local causes may produce sporadic cases, and sometimes endemial diseases; general causes may assist in the production of these, but a combination of both, or of the latter only, are necessary for the production of epidemical diseases.

These observations are strengthened, by the fact, that whenever the yellow fever makes its appearance in any of the large towns and cities in the United States, (and the remark is particularly applicable to the city of Charleston,) it usually commences in the low, crowded, and filthy parts of the city, or wherever the local causes act with the greatest force.

#### REMOTE AND PREDISPOSING CAUSES.

##### 1st.—*Vegetable and Animal Miasmata.*

Either of these, in a concentrated form, is sometimes sufficient for the production of yellow fever; but when combined, they produce a higher grade of fever, or a disease attended with more violent symptoms.

##### 2d.—*Excessive Moisture.*

This is manifest from the well known fact, derived from the history of the diseases of Charleston, for the last half century, that in very wet and rainy seasons, the yellow fever has been more prevalent than in any others.

##### 3d.—*Excessive Dryness.*

It has been observed also, that in very dry seasons, the yellow fever has prevailed much more, than in those seasons attended with a due degree of moisture.

##### 4th.—*Cold.*

This may sometimes operate, both as a predisposing and exciting cause, according to the manner of its application.

##### 5th.—*Heat.*

This may also operate, both as a predisposing and exciting cause, according to the manner in which it is applied.

##### 6th.—*Bad regulated Police.*



7th.—*The prevalence of particular winds.*

As for instance, the prevalence of *easterly* winds, is one among many causes which conspired to produce that aggravated form of disease, with which the inhabitants of the city of Savannah were scourged, during the season of 1819. This general cause, operated, by bringing into action a greater portion of the noxious effluvia from the swamps of Carolina and Georgia, than could have been effected, by the prevalence of any other wind. On the contrary, for the same reason, a general prevalence of *westerly* winds, besides being hotter, are more mischievous in their consequences, and more productive of evil to the citizens of Charleston, than any others. To us in the city of Charleston, easterly winds in the summer and autumnal months, are not only a great luxury, but a general prevalence of them, is almost a sure guarantee of a healthy season.

8th.—*The debilitating passions of fear, grief and despair.*

9th.—*All excessive evacuations.*

The two last may also sometimes act as exciting causes.

10th.—*A constitution unaccustomed to the climate, or to the remote and predisposing causes, &c. &c.*

EXCITING CAUSES.

1st.—*Excessive stimuli of every kind, such as intemperance in eating and drinking, &c.*

2d.—*Cold.*

This is a very frequent exciting cause, especially at night,—it operates by producing a sudden check, either of the sensible or insensible perspiration, or both. The yellow fever has been twice excited in my own system by this cause.

3d.—*Heat.*

I have known several cases produced by exercise, under the influence of the intense heat of the noon-day sun.

4th.—*Unusual labor or exercise.*

5th.—*Violent emotions and stimulating passions of the mind, &c.*

## PROXIMATE CAUSE.

*A morbid excitement of the liver and stomach, producing a morbid, increased secretion of those organs, and a sympathetic action in remote parts of the system.*

This, I think, may be supported by numerous facts and arguments—especially those derived from dissection, but which my present limits preclude me from advancing. I shall, therefore, proceed to your fourth and fifth questions, which may both be comprehended under one head.

FOURTH.—‘Have you seen any person attacked with the yellow fever a second time?’

‘Do you believe the human frame liable to be attacked with this disease more than once?’

In reply to these questions, I have only to observe, that, I myself have *twice* had the yellow fever, to-wit: in 1817 and 1819. On both occasions, I suffered severely, under the calamities of this formidable disease, and to the energetic powers of medicine, alone, *sub providentia*, I owe my life. My sufferings on the latter occasion, were to me a convincing argument, of the susceptibility of the human constitution, to receive the disease “more than once.” And further, the idiosyncrasy which had been by four years residence in the climate of South Carolina, (to which in 1815, I was a total stranger,) and by once having the disease, could not have been changed, because, I had not slept a single night out of the city of Charleston, during the two years which elapsed between my first and second attack.

Several cases have come under my observation, of persons having the disease twice. Captain BOYLE, late of the United States Army, told me he had had the yellow fever several years successively, in the city of New-Orleans; and I have no doubt of the susceptibility of the human constitution to repeated attacks of this disease. But it must be admitted, that by a long residence in a climate or place subject to the yellow fever, and especially by the disease itself, the constitution is rendered less susceptible of a second or third attack, than of the first. It requires, therefore, a greater combination of causes, or the same causes concentrated, so as to act with greater intensity, to produce the disease in a constitution assimilated to the

climate, than to a stranger,—more especially one assimilated by the disease itself. After the first, it requires an increase of force, to produce every subsequent attack, exactly in the ratio of the diminished susceptibility.

Having briefly answered your interrogations, I will now conclude my observations, which I cannot do without expressing the high sense I entertain of the noble object of your pursuit, and the pleasure it would afford me, could I contribute more to the advancement of science and of truth.

Too much honor and too much praise, cannot be conferred on that man, who so nobly hazards life, and expends fortune, in the acquisition of truth,—who undauntedly exposes himself to all the dangers arising from an exposure to the remote and predisposing causes of the highest grade of fever,—who enters the abode of the wretched and the distressed, from city to city, in order to seek out the occult causes, and to ascertain the true nature and character of yellow fever.

It is a pursuit important to the commercial, to the moral, and to the scientific world.

It is a pursuit, in every respect worthy of the attention, the zeal, and the indefatigable industry, of the philanthropist and the philosopher.

That your life may be long preserved, and that you may be enabled incontrovertibly to establish the true nature and character of the yellow fever, is the sincere wish of,

Dear Sir,

Your obedient.

And very humble servant,

[Signed]

J. B. WHITRIDGE.

*Charlesion, S. C.*



## ARTICLE II.

*An Essay, read before the Medical Society of Augusta, on the question. "What are the Characteristic or Diagnostic Symptoms of Cancer, whether in the state of Schirrus or of open Ulceration." By PAUL F. EVE, M. D., Prof. of Surgery in the Medical College of Georgia.*

The importance of the above question, propounded to me at the last meeting of the society, will readily be acknowledged by every one at all familiar with the various and very different morbid appearances, which have been confounded with schirrus and cancerous ulceration. It is confessedly no easy task, to determine how carcinomatous affections are to be distinguished from all other diseases. Even with the light thrown upon the subject by the recent investigations in pathological anatomy, and which has effected so much in the diagnosis of our diseases in general, still a dark and heavy cloud obscures the one now under consideration.

In order to answer definitely the question before us, I propose a thorough examination of the different symptoms of cancer, as recorded by the most distinguished writers on the subject; for it is alone by comparison that we can arrive at an enlightened conclusion. And that our judgement may be correct, and the views of no author misrepresented, I shall not hesitate when convenient, to employ the language of each, to whom reference may be made. I do this the more willingly, as the opinion of foreigners will be quoted to illucidate the subject of carcinoma.

It is proposed in the first place, to examine the symptoms of cancer, whether in the state of schirrus or of open ulceration, in connection with the pathological anatomy of these two conditions of the disease; and then to consider what is its peculiar, characteristic nature.

Cancer is a Latin word and derived from the Greek *carcinos*, signifying a crab, and is so called according to most authors from the distended or varicosed veins existing over a schirrus tumour, which the ancients compared to the claws of this animal;

but some writers suppose it was employed on account of the disease extending by whitish bands into the surrounding soft parts, which resemble the feet of the crab. Without stopping to enquire into the etymological derivation of cancer, or of even questioning the propriety of the expression as applied to disease, I proceed at once to its symptoms; employing it or carcinoma as a generic term, and intending by schirrus and cancerous ulceration, the two very distinct varieties of this affection. So great indeed are the differences in the appearance of this disease in its two states, that it is necessary to consider each separately. In one we have a tumour, and in the other an ulcer.

In the classification of tumours, LAENNEC has very properly admitted two distinct orders of accidental or adventitious productions. In the first class, are embraced those which have an analogy to the natural tissues of the body; and in the second, abnormal productions which have none. It is among these latter tumours that schirri are placed.

A schirrus tumour is generally considered the forerunner of open or ulcerated cancer. By the author of the article on this disease in the Dictionary of Practical Medicine and Surgery, published in Paris, 1830, schirrus is described as being composed sometimes of a perfectly white substance, at other times a little blueish or grayish, slightly transparent, of such a consistency that ordinarily when cut it grates, and which varies from the fat of pork to a hardness approaching that of cartilage. Commonly homogeneous, this matter appears to be divided in masses, which are subdivided into lobules, united by compact cellular tissue of a very variable form according to LAENNEC, but sometimes of a regularity like that of the honey comb. Many schirri moreover, have a great resemblance to the substance of the turnip, others to that of the chestnut.

BOYER, both in his Surgery and in his article on the subject, in the 52d vol. of the Dictionnaire des Sciences Medicales, says, a schirrus is a hard, moveable, circumscribed, resisting tumour, ordinarily indolent or a little painful on pressure. Its almost constant termination is in cancer.

ABERNETHY in the account of various tumours in his Surgical and Physiological Works, states that schirrus sometimes condenses the surrounding tissues so as to form a capsule; and

at other times the organ in which it originates seems to be a nidus for the diseased action. In either instance the carcinoma commences in a small spot and extends like rays from a centre. This, says he, is a feature that distinguishes it from other diseases, which generally involve a considerable portion at their first attack. Another distinction is, that schirrus does not recede like other tumours to medicinal treatment. It also destroys the skin before it acquires any great magnitude. ABERNETHY agreed with BAILLIE in his pathological anatomy of the tumour; particularly in his description of the peculiar hardness, and intermixture of the firm, whitish bands, having interposed between them a brownish substance, or cells containing a pulpy matter of various colours and consistence. As a carcinomatous tumour increases, it generally becomes unequal upon its surface; and a lancinating pain is commonly felt, though it is not experienced in every case.

RICHTER says, it is an inadequate and erroneous definition of schirrus, to call it a hard and painful glandular swelling, having a disposition to become cancerous. He even denied the disease to be regularly attended with swelling. But Sir CHARLES BELL observes, that though the organ in which the disease originates, (as the mamma for instance,) may diminish, yet this is not true of the tumour itself. The general bulk of the breast may be contracted, still the disease is a tumour; there is an increased mass, a preternatural growth, or new matter formed, corresponding to the old definition, *morbosum augmentum*.

SAMUEL COOPER, in his Surgical Dictionary, says, the puckering of the skin, the dull, leaden colour of the integuments, the knotted and uneven feel of the disease, the occasional darting pains in the part, its fixed attachment to the skin above, and muscles beneath and in the breast, the retraction of the nipple, form so striking an assemblage of symptoms, that when they are all present there cannot be the smallest doubt that the tumour is a schirrus. He also states, that without risk of inaccuracy, we may set down the backwardness of a schirrus swelling to be dispersed or diminished, as one of its most confirmed features.

When a section, said Sir EDWARD HOME, is made in a schirrus tumour in its early stage, the centre is more compact, harder to the feel, and has a more uniform texture than the rest of the



swelling, and is nearly of the consistence of cartilage. From this, in every direction like rays, are seen, ligamentous bands of a white colour passing to the circumference, as also others of a fainter appearance in a transverse manner; the whole forming a kind of net work in the meshes of which a softer substance is enclosed. In a more advanced stage of the tumour, the diseased part has a more uniform structure, and no central point can be distinguished. According to Sir C. BELL, it is these ligamentous bands which produce the retraction of the nipple in the breast, by extending between the ducts and destroying its spongy texture.

Sir ASTLEY COOPER says, the swelling of schirrus gradually grows from the size of a marble until it acquires two or three inches in diameter; for it rarely happens that the true schirrus turbercle increases to a very considerable bulk, and this circumstance is one of its criteria.

In the article Cancer, by BRICHETEAU in the *Dictionnaire des Sciences Medicales*, the physical characteristics of schirrus are defined to be, a demi-transparent tumour, having a linear disposition, often lobular, of the consistence varying from lard to cartilage or fibro-cartilage, and composed of tissue which seems to be of cellular production penetrated with albumen of a white, blueish or greyish colour.

Dr. GIBSON, understands by schirrus a preternatural density or induration of the soft parts, not easily resolved and very prone to ulceration. It is also recognised by certain external marks, and by a peculiar internal structure. The whole tumour is unequal on the surface, and uncommonly heavy; the pain is vehement and of a peculiar kind—at first prurient, but afterwards lancinating and compared by many patients to the gnawing of an animal.

Besides these characteristic symptoms of schirrus, and the peculiar pathological changes in the tissues affected, hydatids are sometimes found existing in great numbers, and of different sizes. This circumstance has probably given rise to the theory of the animalcular origin of carcinoma, which was entertained by the late Dr. ADAMS, and which is still insisted upon by Mr. CARMICHAEL of Dublin.

Mr. PEARSON declares he has never yet met with an une-

quivoocal proof of a primary schirrus in an *absorbent* gland.—He thinks it always commences in the secretory glands, as the mamma, the pancreas, testicles, &c. Should this idea be confirmed by experience, it would assist much in the diagnosis of the disease in the state of schirrus.

By a comparison now of the descriptions given by the distinguished authors referred to, we find but little discrepancy in their enumeration of the symptoms of cancer in the state of schirrus, or of the pathological condition of the tissues affected by it.—All agree there is no one pathognomonic symptom or sign of it; but they also concur in an assemblage of them, which when taken together, clearly and distinctly characterize a schirrous tumour. Thus BAYLE and CAYOL state that out of a hundred tumours of the breast, all of which are hard, unequal, insensible to pressure, and which have existed for more than a year, about ninety nine are cancerous. Again, if a tumour presenting these signs of schirrus, has resisted a treatment for chronic phlegmasia, for serofulous engorgement, &c. then is it certain that such a disease is cancerous.

With respect to cancer in the ulcerated state, it may be remarked that writers generally coincide in representing it to be an ulcer opening spontaneously, with hard, jagged and reverted edges, of a very disagreeable aspect, from whose surface there flows a fetid, acrid discharge, excoriating the surrounding skin, which becomes of a purple colour, that of the sore itself being of a dark red. The patient complains of darting pain and of a burning sensation over the whole ulcer, and which when examined presents no trace of cellular tissue, nor of vessel, nor of any other normal structure, whatever may be the organ attacked.

BOYER however, expressly states, that notwithstanding the weight, inequality, hardness, rough irregular shape of the ulceration, the nature of the secretion and the pain, the indiscriminate destruction of all tissues, &c. yet they do not exclusively characterize cancer. It is only positively known by its return when once operated upon; this says he, is the only circumstance which can remove all doubt on the subject of its disease.\*

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An anecdote in point is told of this old veteran Surgeon; which is, that whenever pressed for a decision concerning the nature of a disease supposed to be cancerous, his uniform reply was, "*If it returns after I cut it out, then it is a cancer.*"

A question has originated of some importance in connection with the characteristic symptoms of this disease, and which it is well to notice at this place ; it is whether cancer ought alone to be restricted to schirrus degeneration. Authors generally admit that certain ulcerations may become carcinomatous, without being preceded by the state of distinct tumour. The question too, is I think decided by the admission of two separate classes of cause producing cancer ; viz: an internal and an external. For if an external injury or impression can develop a schirrus tumour under the skin when entire, certainly a similar cause can the more readily produce a like effect upon an ulcer. Be this however, as it may, a genuine cancer in the state of open ulceration, is generally preceded by a schirrus degeneration.

As regards now the nature of cancerous disease, it may be stated that we have nothing very satisfactory on this subject. If it be an affection *sui generis* as it certainly is, this nature is not as yet well defined. It is however, a subject bearing too much upon the diagnosis of cancer, to be omitted, notwithstanding its difficulties, in the present essay.

Cancer is to all intents and purposes a highly malignant disease. None destroys more indiscriminately all the tissues of the body, than it and fungus hematodes, with which it has often been confounded ; and they are even to the present day, considered by nearly all French writers, as only a modification of one and the same disease. Cancer, and fungus are placed by them in the same article, and treated as partaking of the same general characteristics ; differing only in one being in a state of crudity and the other in the state of ramolissement. But this is certainly a very great error.

Cancer, in its nature, differs essentially from fungus hematodes, in its seat, its progress, the contents of the tumour, and the liability of the period of life to an attack. Cancer most frequently affects the female mamma, uterus, testicle or the secretory glands—fungus, the extremities, internal organs, &c. Cancer is generally chronic in its course—fungus is rapid. Cancer commences with a hard, uneven, knotted tumour, which never acquires any great size before ulcerating ; and when opened, the contents are of a cartilagenous durability, even turning the edge of a knife—fungus is a soft, smooth, elastic tumour at its begin-



ning, generally attaining a great magnitude, and when opened, found to contain matter resembling the structure of the brain. Cancer has a central point harder than the circumference of the tumour—fungus has nothing similar to this. Cancer is almost peculiar to old age—fungus to no particular period of life. Cancer, in its progress, contaminates the neighbouring lymphatic glands—fungus never, but affects the internal organs, as the lungs, liver, brain, &c. Two diseases having such differences, cannot be of the same nature.

Cancer differs from gangrene. This latter, as has been said, kills the parts it attacks, or deprives them of their vital properties; while cancer, on the contrary, consumes, devours the tissues still living. Abandoned to itself, cancerous disease never recovers. It often does remain stationary, but when it changes, it is always to increase and never to diminish. These general characters, with those already mentioned, would seem to prove, that cancerous disease is the effect of one and the same cause. In the language of *BAYLE* and *CAYOL*, it remains to be established, what is this cause. Is it black bile, according to Hippocrates—acid black bile, according to Galen—a coagulable lymph become acrid, after Boerhaave—a fœtid oil, alkali or acid—or is it a gas, according to some modern writers? The truth is, we are absolutely ignorant what is the cause of cancer.

*BOYER* supposed that cancer is formed by lymph, arrested in its passage, and in the neighbouring cellular tissue, and that it is the product of an internal constitutional cause. *ABERNETHY* said it arose from a disordered state of health, and agreed with *HUNTER* that there is always a predisposition first in the system, before the appearance of the diseased action. *BAYLE* and *CAYOL* declared the disposition to cancer or cancerous diathesis, is the true and only cause why the disease returns after an operation. According to *ANDRAL*, the fibrine coagulated in blood vessels, constitutes, sometimes in the organs, a whitish mass, resembling tumours called cancerous. *VELPEAU* having had occasion to observe some facts of this kind, concluded that cancer could be developed primitively in the blood. But all this is little satisfactory, and assists us very feebly in answering the question, what is the true nature of cancerous action? Were it true, that cancer depended upon a constitutional diathesis, as these and

other authors, even Sir ASTLEY COOPER, would have us believe, no operation could ever be permanently successful.

While I admit a predisposition to schirrus and cancer, resulting chiefly from old age, still I cannot believe that carcinoma arises in all instances from an internal cause, or that like scrofula, the constitution is primarily affected by it. I must still contend for the local origin of this disease, and that the system is only secondarily invaded by its progress. All that has been well established on this subject, the peculiar nature of cancer, are the chronic induration with hypertrophy of the parts attacked, the difficulty, if not the impossibility, to discuss or resolve such a tumour, its great tendency to malignant ulceration, the destruction of all the tissues indiscriminately of the body, and the occurrence of these circumstances at the age of about fifty years.

Of all diseases, schirrus is most difficult to be distinguished from inflammatory indurations and fibrous tumours. From the first, it has been remarked, that chronic indurations are more or less of a red colour, from the presence of blood invited by irritation, into the part inflamed. They are, moreover, preceded and accompanied by symptoms of inflammation. A fibrous tumour differs from schirrus, in being more isolated from the tissue of the organ affected; in acquiring a large size without ulceration; in its fibres passing in every direction; in the fibrous disorganization being well supplied with blood, bleeding freely when cut into or torn, which is never remarked in schirrus; in never giving pain, producing only inconvenience from its magnitude; finally, in its never degenerating into cancerous ulceration.

The last peculiarity of the disease under consideration, which I shall notice, is its affecting chiefly the white tissues of the body, as the breast, testicle, &c. Now it is this very structure which approaches, in appearance, nearest the schirrus disorganization. Who, for example, does not know that the female mamma, in its healthiest condition, will turn or fracture the edge of the best tempered knife; or who, after a minute examination of its ducts and anatomical arrangement, has not seen some parallel to the whitish bands, &c., of a true carcinomatous tumour?

In conclusion, I define the characteristic or diagnostic symp-

toms of a schirrus to be, at its commencement, a small, hard, moveable, circumscribed, and indolent tumour, ordinarily located in a secretory gland, and occurring most frequently after the forty-fifth year of age. It may remain stationary for years, but cannot be dispersed; generally in about twelve months the tumour increases in size, becomes heavy, unequal or knotty on its surface, forms attachments to the skin and surrounding parts, which are converted to a leaden colour, and the patient will experience darting, lancinating pain through the part affected. So malignant is the disease, that before attaining a diameter of two or three inches, the tumour will have ulcerated. Originating like a local affection, the system soon becomes involved in its progress.

A true schirrus dissected, will present a centre of a cartilaginous hardness, with whitish bands seemingly composed of condensed cellular tissue, proceeding towards the circumference, interposed by others passing in a circular direction, and the whole enclosing a brownish pulpy matter, which exudes or may be scraped from the cut surface.

I define the characteristic or diagnostic symptoms of cancer in the state of open ulceration to be, an ulcer seldom less than two or three inches in diameter; commonly the result of schirrous degeneration; of highly malignant character, destroying every tissue which it invades, and uniformly progressing. The surface of the sore is very uneven, its edges are jagged, very hard, irregular and prominent, the discharge is a fœtid, acrid matter, and the pain is acute and lancinating, or described by patients as a burning, gnawing sensation. The neighbouring lymphatic glands are sure to become affected; and the ulceration when removed is very apt to return, especially if it proceeds from an internal constitutional cause.

The anatomico, pathological appearances of such an ulceration are, an indiscriminate disorganization of all the tissues involved by it, and their conversion to an homogeneous, hard, greyish or red, irregular substance.



## PART II.

## REVIEWS AND EXTRACTS.

*A new treatment in a Case of Anchylosis.* By J. RHEA  
BARTON, M. D.

In the North American Medical and Surgical Journal for April, 1827, I published an account of a new and successful operation at the hip, which had been undertaken for the two-fold purpose of remedying a most serious deformity and lameness, and of *establishing an artificial joint*, as a substitute for the natural articulation, which had become obliterated by disease, terminating in true anchylosis.

The principles upon which this operation was founded, as well as the circumstances justifying the performance of it, were fully detailed in the publication at that time.

In prosecuting my views for remedying lameness and deformity from the mal-position of limbs in cases of true anchylosis, I have been enabled to present another case successfully treated, under circumstances suggesting a practice of a peculiar character.

In the case of anchylosis at the hip joint, it is to be recollected that the neck of the femur was sawn through, and the distorted limb straightened. The wound of the soft parts was then healed, whilst the reunion of the divided bone was prevented by subjecting it, from time to time, to motion; such as gentle rotation, flexion, and extension, abduction and adduction. After continuing this treatment for a few weeks, the ends of the bones lost their disposition to unite, became obtunded and smooth, and were held attached to each other by provisional bands or ligaments, and in this manner forming an artificial joint, whose movements were regulated by all the principal muscles by which the original joint had been controlled: thus fulfilling the ends of my operation, and rewarding my patient for his fortitude.\*

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\* The patient, upon whom this operation was performed, enjoyed the use of his artificial joint for six years; during which period he pursued a business (trunk-making) with great industry, earning for himself a comfortable subsistence, and a small annual surplus. Pecuniary losses, however, through the reverses of those in whose hands he had confided his means, sunk him into a state of despondency and desperation, followed by habits of intemperance. This, with all its train of evils, abuse of health, &c. was, no doubt, the cause of the change which afterwards took place in the artificial joint. It gradually became more and more rigid, and finally all motion ceased in the part. With this exception, the benefits of my operation were

In the case now to be described, no attempt was made to establish an artificial joint; as the attending circumstances did not admit of such a consideration. The object of my treatment was to remove deformity, and to restore to usefulness a limb which had unfortunately been suffered to become anchylosed in a mal-position. The following will, I trust, satisfactorily explain the operation and the after treatment of the case, as well as the principles by which I was guided in the management of it.

S—— D——'s, M. D., formerly of Charleston, S. C., but now a resident of Alabama, when a youth of about nine years of age, unluckily had his knee joint involved in inflammation and suppuration so extensively, as to occasion the destruction of the synovial membranes, the ligaments, cartilages, and, in short, every structure peculiarly appertaining to the joint. After a protracted suffering he finally recovered with the loss of the joint; the tibia, femur, and patella having become united to each other in the form of a true anchylosis. The loss of the articulation of knee, however, though a misfortune, did not constitute the *sadness* of his case. It was caused by the mal-position of the limb; the leg having been flexed upon the thigh to a degree somewhat less than a right angle. Hence the only alternatives of which he could avail himself to aid him in walking were, either to use crutches, or to employ a very high block-sole boot, and to lower his stature by flexing the sound limb in order that both feet might reach the ground. The latter expedient he adopted.—The long continued pressure and weight of the body sustained by this defective limb, acting under such great mechanical disadvantages, had at length caused some projection of the instep, and other irregularities, which it is unnecessary to particularize.

This supposed irremediable condition of his limb, with all its ills, the young gentleman endured during the period of about sixteen years. In the mean time he graduated in medicine, and became a successful and highly respectable practitioner; but as his professional labours increased, he found the condition of his limb to be an obstacle not only to his further success, but also a source of unceasing annoyance and vexation. Whereupon, with

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retained and fully appreciated until the period of his death; for as the limb had been freed from deformity and restored to a useful position, he had no occasion even for a cane to aid in walking. During an attack of the Asiatic cholera, he expressed a desire that I should be sent for, in order that he might renew his bequest to me of the parts interested in the operation. He recovered from the cholera, but subsequently died of phthisis pulmonalis. The autopsy exhibited the parts as described in the published case, but with the artificial joint anchylosed; a change which had been effected within two years previous to his death. With ordinary care, in all probability, this would not have taken place.

The final history of this case presents now the important fact, that benefit had resulted, which fully requited the individual for the pains he had endured, and were considered by him, even after the closure of the joint, yet an ample reward for the operation he had undergone.

a resoluteness not surprising to those who knew the strength of his mind, the firmness of his character, and the abundance of his manly courage, he repaired to Philadelphia in order that some relief might be obtained, if it were possible. When consulted by him I found him fully prepared to learn that no benefit was to be expected from any heretofore known practice, and that if he could be relieved it must be by some novel expedient and treatment.

After a candid and full disclosure of my views of his case, and of the means by which I thought he might be benefitted, his own judgment accorded with mine; and believing in the feasibility of the plans, he became urgent for the undertaking. It was accordingly commenced on the 27th day of May, 1835, and pursued as follows:

Two incisions were made over the femur, just above the patella. The first commenced at a point opposite the upper and anterior margin of the external condyle of the femur, and, passing obliquely across the front of the thigh, terminated on the inner side. The second incision commenced also on the outer side, about two and a half inches above the first; and passing likewise obliquely across the thigh, terminated with the other in an acute angle. By these incisions were divided the integuments, the tendon of the extensor muscles of the leg, at its insertion into the upper part of the patella, and some of the contiguous fibres of the rectus and crureus muscles themselves, a greater part of the vastus internus, and a portion of the vastus externus muscles. A flap, composed therefore of this structure, was elevated from the femur close to the condyles. The soft parts were next detached from the outer side of the bone, from the base of the flap towards the ham, by passing a knife over the circumference of it, as to admit of the use of a saw. The flap then being turned aside a triangular or wedge-like piece of the femur was easily removed by means of a small narrow bladed saw; such as was used in the operation at the hip. This wedge of bone did not include the entire diameter of the femur at the point of section; so that a few lines of the posterior portion of the shaft of the bone remained yet undivided. By slightly inclining the leg backward, these yielded, and the solution was complete. This mode of effecting the lesion of the bone was designedly adopted, and constituted what I conceive to be a very important measure in the operation. Important, because it rendered the popliteal artery free from the danger of being wounded by the action of the saw, and subsequently the interlocking of the fractured surfaces tended to retain the extremities of the divided bone in their positions until the harshness of their surfaces had been overcome either by the absorption of their angles, or by the deposition of new matter upon them—a change essential to the



safety of the artery during the subsequent treatment of the case. Not a blood vessel was opened which required either a ligature or compression. The operation, which lasted about five minutes, being thus ended, the reflected flap was restored to its place, the wound lightly dressed, and the patient was put to bed, lying on his back, with the limb supported upon a splint of *an angle corresponding to that of the knee previous to the operation*. This position was maintained until it was believed that the asperities of the bone had become blunted, and were not likely by their pressure to cause ulceration of the artery beneath them. This first splint was then removed, and another having the angle slightly obtuse was substituted. In a few days a third splint, with the angle more obtuse than that of the second, supplied its place. Others, varying in degrees of angularity, in like manner came in their turn to support the limb until it had attained a position almost straight. It was then unchangeably continued in that line until the contact surfaces of the bone had united and securely fixed the limb in this the desired direction.

During the treatment of the case, especial care was bestowed in protecting the popliteal vessels against any injurious encroachment upon them. With that view, all antagonizing pressure on the soft parts in the ham was carefully avoided. The limb was rested on two long bran bags, laid upon the splint, with their ends apart—a vacancy of four or five inches being left between them opposite the lesion of the bone. This interspace was lightly filled with carded cotton, so as to afford a safe support. Every symptom of pain or uneasiness in this part was promptly attended to. The occasional issue of a drop or two of blood from the corner of the sore, during the process of dressing the limb, caused me some solicitude in this case; whereas, ordinarily I should have considered it as a matter of no moment—it being so frequent an occurrence during the dressing of wounds, owing to the disturbance of the granulations, especially in compound fractures. The wounded soft parts finally healed and quieted his anxiety. The straightening of the limb having been very cautiously and by degrees effected, the first two months elapsed during the accomplishment of this object. Having then reduced it to the desired position, means were carefully observed to retain it so until the re-union of the bone had been fully completed; which occupied two months longer. The constitutional symptoms were such as usually occur in compound fractures—somewhat severe, but at no time alarming. Throughout the whole treatment it was not found necessary to bleed him, or to have recourse to any very active constitutional measures. He was occasionally indisposed from irregularity in the digestive functions, but was always speedily relieved by resorting to mild and appropriate remedies.

At the end of about four months from the date of the operation my patient stood erect, with both feet in their natural position, and the heels resting alike upon the floor, although a slight angle had been designedly left at the knee, in order that there might not be any necessity for throwing the limb out from the body in the act of walking, which is always the case when the knee is quite straight. After this period, the use of shoes of the ordinary shape was resumed, and the limb was daily exercised with increasing strength and usefulness. On the 19th of October, the Doctor took his departure for the South, bearing with him the injunction to continue the support of a small splint and the aid of a crutch or cane, until he should acquire sufficient confidence in the strength of the limb to justify him in laying them aside.

I was subsequently advised of his improvement: but was resolved not to give publicity to the case until the full and entire benefit of the operation could be ascertained. The wide distance which afterwards separated us prevented me from obtaining the necessary and direct information until within a recent period. I have the pleasure now not only to afford this intelligence, but to present it in the most satisfactory manner. Having written to the doctor for the information, and to learn from him in what manner it might be agreeable that I should refer to him as the subject of the case the following clear, satisfactory, and well written answer was promptly received. As the letter is full of interest in the case, I must be excused if I publish it almost entire, even though it contains some flattering sentiments for the one to whom it is addressed. That part only has been omitted which is in courtesy to my family.

CHARLESTON, November 6th, 1837.

"My dear sir,—Your letter of the 8th October, directed to me at *Mobile*, has just reached me at this place, where I am on a visit to my parents. I received a letter from you last winter, some months after its date, and availed myself of the opportunity of a friend going to Philadelphia, and who promised me that he would see you, to send you a full communication of my situation then. I preferred this to writing by mail, as he had been with me, and could answer any particular inquiries you might make. On his return he mentioned that he had arrived in Philadelphia only a few days after you had sailed for Europe. Your letter of the 8th is the first information I have had of your return. I have the satisfaction and pleasure of saying to you now, that the operation you performed on my leg has been *completely* successful, and has more than realized my most sanguine anticipations. The small abscess, which you dressed the day before we parted at Norfolk, continued open, and threw out, from time to

time, small pieces of bone, until the August after, when the last piece was discharged; the orifice then closed, and I have suffered no material inconvenience from it since. From the January previous, however, I was going about and attending to my professional business; and early in the summer, when our sickly season commenced, I was on horseback daily, riding from thirty to fifty miles a day; without more than the ordinary fatigue or inconvenience. I am at present well; the wound sound; and I feel no other inconvenience in riding or walking, than what arises from my knee joint being stiff, which was the case before you performed the operation. I walk without a stick or other aid, with the sole of the foot to the ground, and my friends tell me, with but a slight limp; and I have great pleasure in adding that the leg and foot have increased considerably in size, so as now to be nearly equal to the other. When I think of what I was, and what I am; and that to your firmness, judgement, and skill, I am indebted for the happy change, I want words to express adequately all that I feel. I will not attempt it, but believe me, my dear sir, I feel it not the less. I shall remain here a week or two longer, and if you wish any further information on my case, do write me and I will give it most cheerfully. After that period I cannot say where a letter would reach me. Adieu.

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and am, my dear sir, very sincerely, your friend,

SEAMAN DEAS.

To Dr. J. Rhea Barton.

P. S. In the statement you propose publishing of my case, I am quite willing you should refer to me in the manner you suggest, using my initials in the body, and my name at length in the note you propose appending to it."

*Remarks.*—In the case just recited, several difficulties of a peculiarly embarrassing nature presented themselves as obstacles to the restoration of this disabled limb; namely, the true character of the anchylosis, the extreme angle at which the joint was fixed, the changes of structure which must have taken place during the past sixteen years, and the probable condition of the flexor muscles of the leg. As these had not been called into action since boyhood, it was questionable whether nature had contributed to their growth in proportion to the development of the other parts of the body; or if she had, whether their contracted and inactive state for so long a time had not rendered them functionless and unyielding. It was not improbable, also, that the blood-vessels had acquired adhesions and an organic angular form at the bend of the knee. The operation was devised, and



the treatment pursued, with due regard to all these circumstances.

It must be apparent that, if the tibia and femur could have been disengaged from each other at the point where the original joint had existed, this should have been the selected spot; but it was forbidden by the bulk of the condyles, the adhesion of the patella, by the extent to which the incisions would have been required, and by the disadvantageous position of the popliteal artery, as it lies embedded in the recess between the condyles of the femur.

The most eligible spot for the section of the bone is that available point which is nearest the original joint, and is at the same time free from these objections. Hence the choice which was made.

The flap elevated from the bone was composed of parts which, in a natural state of the knee-joint, it would have been improper to have divided; but as the articulation had been annihilated, the *functional* importance of the parts appertaining to it had ceased; consequently no material disadvantage was to be apprehended from a division of them. The *shape* and *direction* of the flap were believed to be those best suited to the necessary and convenient exposure of that portion of the bone which was to be exercised, and with the least possible injury to the adjacent parts. The profile of the piece of bone which was removed formed a tolerably accurate equilateral triangle. Its shape was of importance to the success of the case; and the angle at which the section should be made became a matter of calculation. If it had been cut at too acute a degree the new surfaces would have reached each other before the limb had been sufficiently extended; if at too obtuse an angle, the leg would have borne full extension without entirely closing the gap. The reunion, consequently, might have been prevented. If a single transverse section of the bone had been made, instead of the above, there would have been a necessity for great elongation of the flexor muscles of the leg and yielding of the other soft parts behind the knee, and if accomplished, there would have been left between the divided surfaces of the bone a large triangular gap or chasm, which would most probably have occasioned a false or artificial joint, without the requisite muscles to control its movements. By the excision of the wedge-like or triangular piece in front, the axis upon which the bone turned was brought so near to the muscles, or their agents, the tendons in the ham, that a slight deviation from their direction only was required, instead of an elongation of their fibres. In proportion, also, as the limb was extended, the chasm in the bone, occasioned by the removal of the piece, became diminished; and upon the restoration of the limb to the nearly straight line, the gap was closed by the approximation to

contact of the sawn faces of the bone, in a manner resembling the corresponding surfaces of an oblique fracture, when accurately adjusted.

It is not the least interesting circumstance connected with the history of the case, that the subject of it was an enlightened physician—one capable of appreciating our profession as a science—and for the undeniable proof which he has afforded of his confidence in it, he fully merits our thanks, as well as all the special benefit which he has derived from the operation.—*Amer. Jour. of the Medical Sciences.*

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### *Lithotomy.*

On contemplating any surgical operation which has proved as dangerous on the hands of the ablest surgeons, as Lithotomy, the practitioner who has been no more accustomed to its performance than the generality of those who are distributed throughout our widely extended country, feels the necessity of something like a practical formula which will afford a clearness of view, and decision and confidence in every point appertaining to ultimate success. However dexterous and successful he may have been in other operations, he feels that, in Lithotomy, surgery has, with the best practitioners, effected a smaller proportion of good success than in almost any other operation. Peddling Lithotomists who have had their day in Europe, have indeed operated *boldly* by a rote formula, without science, and with various, but not very good success—boldly, because like the steamers, they were most stupidly and culpably ignorant of the dangers into which they plunged. Their formulæ have been taken up and adopted by men, accomplished in anatomical, physiological and pathological knowledge and surgical dexterity; with but little better success. The ill success which has too generally attended this operation, has been so much believed to be inseparable from the nature and importance of the anatomy concerned, as to lead to a thorough anatomy of the seat of the operation, and finally to the efforts of CIVIALE and others for avoiding entirely the dangers of the gorget, by substituting other plans of operation on the stone, which have hardly equalled the first expectation. Yet they are more freely ventured, because the dangers of the knife

or gorget are not in array before the practitioner. But Dr. DUDLEY's success in this operation has been such as is calculated to impart confidence in the general contemplation of lithotomy; and as this operation, apart from its *dangers* is calculated to be more thoroughly successful, and even less painful than those which spare cutting instruments, we think it important that the whole management of this operation should be fixed in the mind of the practitioner. We are aware that the best showing is made of Dr. D's. success in this operation, and that all kinds of cases which may be numbered for increasing the numerical showing of success have been thrown in and counted; but still, peculiar circumstances have thrown a larger proportion of cases of this kind into the hands of Dr. D. than fall to the lot of most surgeons; and he has consequently become more familiarised to their treatment in this way, and more confident in the undertaking. It should be remarked however, that he who will undertake the management of *all cases* of urinary calculi, may not expect a nominal success equal to this reported of Dr. DUDLEY, because, like many other practitioners who have a special eye to fame in naming his proportionate success, he has only operated on favorable cases, or such as he was able to render so by previous treatment. Still we are pleased with his formula, and feel that it is one calculated in its nature to inspire a more than usual confidence in the operation. And in all this, we think there is no point of more special importance than that of due *preparation* of the patient, and the fact of his being absolutely free from all other pathological conditions.

Dr. DUDLEY's operation is of itself, simple and easy—having nothing new or peculiar; and from the effect of due preparation of the system, and exemption from other diseases, in many other cases as catarrhal affections, amputations, accouchement, &c., we are bound to attribute whatever little success which may have followed Dr. D's. operations for the stone, more to the due regard to preparation and the excellent nursing and subsequent management, than to all other particulars of his practice: that is to say, that altho his operation is unobjectionable, it is not new, and could not produce a greater proportion of good results than it has before done, without due regard to the previous state of the system, and to the subsequent good management. The importance



of due preparation of the system cannot be too strongly pressed on the attention of all practitioners. It should be borne in mind that *cet. par.* a due and judicious regard to this will give better success in the practice of midwifery; and that the immense difference in the result between cases of small pox by inoculation, and those from its reception in the natural way, is attributable, not in the least to the fact of inoculation, as this is only another way of applying the same cause; but to that preparation of patients which is duly attended to before the disease is voluntarily communicated.

We cannot do so much justice to this subject in any other way, as by giving the entire formula contained in Dr. J. M. BUSH's paper on Dr. DUDLEY's operation, contained in the *Transylvania Journal of Medicine*.

"Whether the deranged state of the stomach, in the patients, who come to Lexington for surgical operations," says Dr. D., "be the result of *irritation* or any other morbid action, (we have not seen a case of inflammation of the organ,) Professor D. has secured his unparalleled success chiefly by the liberal use of emetic medicines. To see the paramount importance he attaches to a perfect preparation of the general system, of all his patients, who are to submit to the knife, is to witness his seemingly tedious course, under such circumstances. While we have known a patient arrive on one day, with cataract, or a tumour, or hydrocele, or stone in the bladder, or any disease small or great, and put upon the table the next day for operation; we have seen another remain several months, undergoing treatment all that time, to change morbid actions of the digestive apparatus to healthy."

Professor Dudley "condemns most earnestly the use of the lancet, as a preparatory mean for the performance of operations; a practice that is reprobated now, we believe, universally, by the most intelligent surgeons of every country."

Professor Dudley does not consider ulceration of the bladder as forbidding the operation, provided, by proper treatment.

"The digestive organs are restored to their natural actions, the agonizing paroxysms of pain retire, the discharges of blood and muco-purulent matter subside, and clear inoffensive urine appears in more copious and natural discharges."

Under such circumstances he has successfully operated.

The following is the course of treatment pursued by Prof. D., as detailed by his friend:—

"When a patient applies to Professor D. with the ordinary

symptoms of stone ; to ascertain its existence, the first step of course is to explore the bladder with a metallic sound. This simple but indispensable operation, however, he never performs, in any case, for several hours after the arrival of the patient ; and not even then, if there be pain in the organ or the slightest fever. For it is considered highly detrimental to the sufferer, to disturb the constitution while thus deranged, even with an instrument usually so harmless. Should the general condition of the patient's body not otherwise forbid, the day after his arrival, he is sounded, having taken a general warm-bath the evening previous. But if he be suffering with paroxysms of the stone, and his blood-vessels exhibiting febrile action, with a deranged state of the alimentary tube, more energetic treatment is required before the instrument is passed into the bladder. Nauseating potions of ipecacuanha or tartar are exhibited, and should these fail to reduce the pulse and restore cutaneous action, or a proper condition of the bowels, aided by the bath, an emetic, or cathartic, or both, are then superadded, with light and abstemious living. By these means two objects are effected. The first, is a prevention of any irritating results from the examination of the bladder ; the other is that so much is gained in the preparatory management of the general system. Until he is completely satisfied that all the organs are in the healthy performance of their various functions, he will not operate. When, however, it is believed that the patient is ready, having been one or more times sounded, he is placed on the table and tied ; immediately the staff, being oiled, is introduced into the bladder, and left resting upon the stone ; when the assistant grasps it firmly, to maintain it in the bladder, at the same time holding it perfectly perpendicular to the table, carefully avoiding any inclination of it to the right or left. The convexity of the instrument being distinctly felt in the mesial line of the perineum, the operator, seated in a convenient chair, with his instruments spread on his right, proceeds to the operation. While the left hand controls the scrotum and perineum, the right makes an incision, with a middle size convex-edge scalpel, beginning a little below the root of the scrotum, and terminating an inch, more or less, behind the verge of the anus, in a straight line, through a point midway between the verge of the anus and the inner edge of the left tuber ischii. This cut divides skin, subcutaneous tissues, and perineal fascia. The second stroke of the knife is not so extensive, it divides only the posterior fibres of the accelerator urinæ, and transverse perineal muscles. Always at this stage of the operation, if the perineum be remarkably concave, presenting an inclined plane, or if the arch of the pubis be much contracted, Professor D. introduces the left middle-finger into the rectum, and draws off the bowel to the right. The fore-finger then placed in the wound conducts

the scalpel through the membranous parts of the urethra into the groove of the staff, cutting from the rectum towards the bulb. The scalpel is now laid aside and the gorget is taken up, the beautiful instrument of Mr. Cline; with its cutting edge towards the pubic arch; its beak is made to engage the groove of the staff, while the assistant resigns the latter to the surgeon's left hand, who for an instant playing the two instruments against each other, lateralizes the former, turning its cutting edge to the left, poises it for a moment, perfectly horizontal, before he plunges through the prostate into the bladder. At the same moment the gorget is passed with the right, the left hand depresses the handle of the staff; the bladder being opened, the staff is withdrawn, and the surgeon's fore-finger of the left hand, directed by the gorget, is passed into the bladder, and the instrument withdrawn; the wound in the neck is dilated, forceps introduced, the calculus seized, and by steady, firm, and dilatory movements, from below upwards, and from side to side, the operation is completed by the extraction of the stone. The bladder is now cautiously explored with the scoop, and if found clear is filled with warm water from a syringe; the patient is untied, turned to his left side and thus put to bed, and is required to maintain the position for from two to four days. We have seen professor D., in making this operation, release his patient in forty seconds from the first incision, while upon other occasions, twenty minutes were consumed before the extraction of an enormous calculus could be safely effected. He makes it a principle never to operate in any case against time, but always firm, deliberate and dexterous, he goes through what is before him with a rapidity compatible with circumstances and the safety of his patient. In the operation of lithotomy especially, his incisions are made with the greatest expertness and brilliancy; and notwithstanding we have repeatedly assisted him, we have not realized the moment when the gorget was passed, the staff withdrawn, and the finger thrust into the bladder; these three different points of the operation, always seem to be the work of an instant.

"In all his operations, he has used but two sizes of the gorget, the smaller seventenths, the larger eight-tenths of an inch broad in the blade. With the latter instrument, he has made an incision through which was safely extracted a calculus, three and a half inches in its long diameter, two and a half in the short, and eleven in the circumference.

"It is evident that the larger size of the two is not wide enough to divide completely the prostrate laterally, in the adult, or even at any age from twelve years to maturity; while with the smaller gorget, the prostrate of the child from three to twelve is entirely safe from the invasion of its capsule. Certainly the opening made into the bladder, by either of the two instruments, is often very



disproportionate to the size of the stone, still in one hundred and forty-three cases, in which those identical gorgets have been used, calculi varying from the size of a pea to that of the magnitude just cited above, have been extracted, with complete success and safety to the bladder, in all cases; and in but four did the subject die before he had time to enjoy the happiness of a cure. Yet in those four cases, which failed to realize the benefits of the knife, in consequence of the supervention, or aggravation, of other diseases, beyond the control of remedies, the bladder healed before death, or they passed the usual period of closing.

"Some surgeons when they have cut into the bladder, and ascertained that the stone is very disproportionate to the extent of the incision, prefer using cutting instruments a second time, with the view of extending the cut in the prostate and neck of the bladder. This practice our teacher has never adopted; but on the contrary always condemns. He contends, it is more philosophic surgery, in such cases, to extract the stone by increased attractive force, risking even a certain degree of laceration. No surgeon estimates more highly than he the advantages of a clean, smooth incision; but his extensive experience, in the operation of lithotomy, has entirely satisfied him, that the danger so generally ascribed to violence done the deeper tissues, in laceration, is not at all comparable with the beneficial consequences of such practice. Indeed the results of his mode of operating, under circumstances of a large calculus, induce him to inculcate the principle, that it is better, safer to extract by force, according to the size of the stone, than to resort a second time to the knife. In every instance, where he was required to remove a stone, which he commanded with forceps in the bladder, he had uniformly extracted by gradual dilatory and tractive force, without in a single case dragging away any of the soft parts.

"Every surgeon understands the great facility with which a calculus may be taken from the female bladder, so dilatable are the parts concerned in the operation. Unless the accretion be of unusual magnitude, Professor D. does not in the female use any dilating means previous to the moment of commencing the operation. After the patient is thoroughly prepared, and it is ascertained that the calculus is moderate in size, he proceeds directly to the operation. The same position is required as in lithotomy. With a graduated supply of forceps, he first introduces the smallest size, and gently expands the blades, in various directions, until the urethra and neck of the organ will admit the next size instrument; so on until with forceps of a proper kind, he can grasp and remove the calculous body. We have witnessed this operation, made upon a little girl six years of age, completed in forty minutes by the removal of a stone of the size of a pigeon's egg, and the pain did not seem to equal that caused

by the extraction of a similar size body in lithotomy. This patient was perfectly well in five days after the operation, without the loss of the powers of the sphincter vesicæ. If the urethra and neck of the female bladder is so extremely relaxable, under the influence of instruments, without the aid of incision, why not expect to find the same accommodation in parts similar in the male, with the addition, to be sure, of the prostrate body ; a piece of anatomy, that Nature seems to have constructed with a peculiar fitness to facilitate extraction, doing away the necessity of a dangerous encroachment with the knife, beyond the point of its fibrous envelope. The prostrate gland appears not only to possess the property of ready and innocent laceration, splitting of its tissues, but also of extensive dilation ; and indeed it would appear that its strong capsule was also accommodating in relaxing character.

“The operation completed, the patient is put to bed without the slightest dressings of any kind, but required to remain on the left side, until suppuration is established. He is not disturbed, even with sponge and warm water until twenty-four or thirty-six hours after the operation. From his long experience Professor D. does not fear infiltration of urine ; nor has he any reasons to adopt means, such as catheter and sponge, or any material for the purpose of plugging the wound, since such a result never has followed his operations. Infiltration unquestionably does occur in many cases, and sometimes terminates in sloughing or mortification of the parts involved, and even in the death of the patient. But we do not believe that either of those undesirable effects do follow, (unless in very rare cases,) as a mere result of the operation. We should rather ascribe such a state of things, nine times in ten, to the ill condition of the general system previous to and at the time of the operation. Under such circumstances serious wounds of any description, are, most assuredly, far less manageable than in the opposite state. Then when the perineum, the urethra, prostrate body and neck of the bladder have suffered a solution of continuity, when morbid actions are existing in the economy, nature too often must fail in her restorative attempts, while healthy progressive inflammation cannot develop itself sufficiently to erect barriers to the diffusion of urine ; adhesive lymph is not thrown out in sufficient abundance along the incised parts, thus to restrain the limits of the urinary discharges.”

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### *Anatomy of the Lymphatic System.*

It is a sign of a healthy condition of the professional mind, when we observe a disposition to cultivate anatomy, and to ex-

tend the knowledge of its facts. The accurate determination of the latter is so inseparably connected with the science of medicine, that the increase of our acquaintance with them must necessarily lead to its improvement.

The diffusion of such knowledge is a great desideratum. It is not, however, very readily effected, for the majority of persons are prone to seek for the minimum, not the maximum, of attainments which will keep them afloat in their respective occupations, and far too many medical men, who have studied anatomy as a task, are apt to regard it with disgust, and to hug the idea that a small quantum of it will serve them in the practical part of their profession.

It is not necessary for us to combat such a notion with elaborate arguments, nor to bring the heavy battery of reason against so obvious a fallacy. One consideration is sufficient of itself to overthrow it. The signs and symptoms of disease are no more than altered states or functions of the organs or the tissues:—it therefore follows as a necessary consequence, that the more intimately we understand the normal condition of those tissues and organs, the more accurately, we shall understand their disordered states, more accurately, in short, we understand disease.

If the man who is content to be a routinist, could calculate on always meeting with routine cases, there might be some sort of petty and contemptible rationality in his election. But, in the simplest case, contingencies may supervene, and complications, more or less obscure, may arise. Will any man of honour, will any man of prudence, voluntarily set out in life, with the determination to do just as little as possible, towards making himself master of such complications and contingencies?

If we appeal to experience, every-day experience, we must be satisfied of the *de facto* superiority in practice of the surgeon or physician who is thoroughly versed in anatomy. Of course we do not say that an excellent anatomist may not be a deplorable practitioner. That is not the point. The position we contend for is, that *cæteris paribus*, the better the anatomist the better the practitioner, and that the reasonable cultivation of anatomy does not tend in any way to incapacitate persons for practical pursuits. We admit that men who spend all their time in the dissecting-room, who think of little else, work at nothing else—we admit that such men are conversant only with the dead, and cannot be expected to be otherwise; but that is not the kind of anatomical study we are talking of. We wish every surgeon and physician to continue to take an interest in anatomy after his collegiate examinations are over—to look at the best anatomical works—to keep himself at the level of advancing anatomical knowledge. We do not urge the high consideration, that it is pleasant to feel we are not mere laggards in science, but merely



hint the more homely, but perhaps the not less potent one, that it is useful to know as much as other people.

It has been generally stated in most works, on descriptive anatomy that lymphatic vessels may be discovered in every part of the human body, except in the substance of the brain, spinal marrow, eye and placenta. The recent researches however of M. Fohmann, Panizza, Arnold, and some other continental anatomists, have shewn that this assertion is not strictly correct, and that it is to be received with certain limitations. The first of these authors has described and represented with great care numerous lymphatics in the membranes and on the surface of the brain, and also those of the umbilical cord and of the placenta. Arnold says that he has detected lymphatic vessels in several of the tissues of the eye; but this announcement has not certainly been confirmed by the dissections of others; and, in the opinion of many, even the authority of M. Fohmann has not been deemed sufficient to establish the existence of lymphatics in the placenta. M. Panizza, for example, certainly one of the ablest writers on the absorbent system, confesses that he is not satisfied of the truth of this statement.

Leaving therefore these points of dispute, we shall now very briefly detail some of the most interesting and best ascertained facts, relative to the lymphatic system.

According to M. Breschet, the cellular tissue is the principal source or ground work whence the lymphatic vessels take their origin; it is the soil, so to speak, in which their extreme roots strike and ramify.

If we observe lymphatics proceeding from, and seeming to arise out of, the substance of many organs of the body, it is because cellular tissue constitutes the basis and elementary component of these organs; and hence we find that those very parts, into which the cellular tissue does not enter, are destitute of these vessels—as, for example, the nails, horns, the epidermis, the hair, and the enamel of the teeth. Mascagni long ago announced the opinion that all the white tissues of the body are actually formed or composed of innumerable lymphatic vessels—an opinion too vague and general to be received as quite correct—and more lately M. Cruveilhier has stated in his descriptive anatomy that he deems it very probable that the cellular tissue and serous membranes primarily and chiefly consist of a meshwork of these vessels.

There are two methods in which the lymphatics of serous membranes may be exhibited—either by inserting the sharpe point of the usual apparatus, used for injecting these vessels and filled with mercury, into the substance of the membrane, or by introducing some colored liquid into the cavity lined by it, during life, or immediately after death. Those of synovial membranes

may be discovered in the same manner. The lymphatics of the dermoid tissue have of late years been examined with great care by Lauth, Fohmann, and by M. Breschet himself. He has described them minutely in his work on the structure of the skin published at Paris two years ago. They are exceedingly numerous, and appear to be, for the greatest part, more superficial than the vascular capillaries. No trace however of any open orifices on the surface of the dermis can be discovered, even with a strong magnifying glass. Some anatomists indeed have stated that they have observed globules of the mercury ooze out, when pressure was made on the skin at the same time; but this phenomenon is ascribed by Breschet and others to rupture of the lymphatics, and not to simple exudation from them. He contends therefore that there are no discoverable open extremities of the lymphatics on the surface either of the skin, or indeed of any other tissue of the body.

M. Panizza takes the same view of the subject. He details several experiments, in which he made a very successful injection of the superficial lymphatic plexus of the glans penis, and wherein, on carefully removing the epithelium, no trace of any exuded globule of mercury could be found.

The mucous membranes, like the skin, give rise to numerous lymphatics; so numerous indeed, that they, along with minute blood vessels and nerves, appear to constitute the villousities on their surface. Although no open orifices have ever been discovered in mucous membranes, MM. Cruveilhier and Magendie are of opinion that such do really exist.

They allude to the results of several experiments, in which the abdomen of a living sheep was opened, and milk introduced into a part of the gut. When the distended portion of the gut was compressed with the hand, the lacteals were immediately filled with the white fluid. M. Breschet however is not satisfied with the details of these experiments; and he very justly says that all forcible compression of the gut should be avoided in conducting such experiments, as it may possibly cause a rupture or laceration of the extreme ends of the tender vessels. However this may be, no person has ever *seen* the open orifices of the lacteals on the surface of the villi; and our author is therefore quite correct in condemning the practice of assuming the rationale of physiological phenomena, merely because these may be explained in a particular manner. It is exceedingly probable that imbibition or some similar process, has something to do with the introduction of the chyle and lymph into the extreme absorbents. But in truth all that we *know* with *certainty* is, that we *know* nothing *certain* on the subject. It remains a problem for future anatomists to solve.

Equally gratuitous is the doctrine, that the lymphatics are

continuous with, and are derived from, the extreme capillary branches of the blood-vessels. It is well known to anatomists that, by pushing a fine injection into an arterial trunk, the lymphatics of the part sometimes receive a portion of the injection. This experiment has been deemed quite sufficient by many writers to establish the reality of a direct inosculation of the two sets of vessels; nay Lippi has gone so far as even to represent such a connection in one of his engravings.

M. Breschet however, and, we believe that we may add, almost all the best anatomists of the present day do not admit the truth of this doctrine. They attribute the passage of the injection in the above experiment to extravasation from the minute arteries, and to consecutive absorption or rather impulsion of it in the lymphatics. Our author closes his remarks on this subject by adopting the opinion of Panizza, that "anatomy has not hitherto succeeded in determining, with physical certainty, in what relation the sanguiferous and lymphatic systems stand to each other, at their extreme ramifications." If we suppose that the cellular tissue itself is in fact made up of a meshwork of lymphatic vessels, we perhaps get rid of the difficulty; but even then we cannot state, with any degree of precision, in what manner the lymph and chyle do enter into the vessel themselves. We know that the lymph and chyle contain numerous globules of considerable size, larger even than those of the blood. The question comes to be, How do those gain admission? or are we to suppose that they are developed within the tubes of the lymphatics themselves?

We thus encounter fresh difficulties at every part of the investigation; and it is therefore much wiser to confess our total ignorance of the subject.

Nothing is of greater importance in all physical researches than to acquire exactitude at every step of our investigation. Whenever we begin to frame hypotheses, unsupported by actual observation, merely for the purpose of giving a probable explanation of certain phenomena, we are almost sure to be bewildered in the mazes of our own making. We shall therefore leave the subject, on which we have been discoursing above, merely repeating our own former statement that no anatomist has yet *seen* any open orifices of lymphatics in any structure of the body, either in man or in the lower tribes of animals.

We now proceed to another topic, in the history of the human lymphatic system, which has given rise to much difference of opinion. We have confessed our ignorance of the relation which exists between the capillaries of the sanguiferous and of the lymphatic systems. It now remains to be determined what knowledge we have respecting the connection between the larger vessels of these two systems.



It has often been conjectured by anatomists, that there are some other communications between the lymphatics and the veins, in the human body, in addition to the thoracic duct, and the lymphatic trunk which proceeds from the right arm and usually terminates in the right subclavian vein. That such communications do exist in the lower classes of vertebrate animals is proved beyond doubt by the researches of Fohmann, Lauth, Panizza and Müller. They are obvious on the intestines and the mesentery in fishes, on the thigh in the frog, and on the lower extremities and the intestinal canal in birds. No such communications however are discoverable in any part of Mammals. Still the question has often been mooted whether any inosculations between the two sets of vessels, besides those above mentioned, do really exist in this class of animals.

Many of the older anatomists believed, that they had traced lymphatics to their terminations, not only in the vena cava, and v. azygos, but also in the hypogastric and lumbar veins; and even as late as 1825, M. Lippi of Florence has maintained that the lymphatics of the digestive organs in men, as well as in other mammals and also in birds, communicate directly with the venæ cavæ, the vena portæ, the vena azygos, and with the renal and internal pudic veins. But all the best authorities, the more ancient as well as the very recent, have denied the accuracy of these statements; and it has been clearly proved that the error of Lippi has arisen from his mistaking branches of veins themselves for lymphatic vessels.\* Fohmann says distinctly that, during five years most laborious investigation of the absorbents, he has never detected any direct communication between the veins and the lymphatics, except in the glands, (this, we shall afterwards mention, is a doctrine not admitted by all anatomists) and in the immediate neighbourhood of the termination of the thoracic duct.

But although no communication can be traced with the larger veins, some authors have contended that the lymphatics inosculate directly with the smaller venous branches in different parts, and especially with those of the mesentery.

M. M. Fohmann and Panizza however expressly assert that they have in no instance been able to detect such a connexion.

The only other hypothesis on the subject of venous and lymphatic communication, which remains to be mentioned, is that which supposes that the two sets of vessels inosculate with each other in the substance of the absorbent glands. This opinion was adopted by the first Meckel, and also by Caldani.

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\*Ross iii has shewn conclusively that Lippi's error was that of mistaking veins for lymphatics, by demonstrating that the vessels believed by Lippi to be lymphatics had no valves, a fact which proves them veins; as all lymphatics have valves, and all veins less than one line in diameter are destitute of them.—*Ed.*

Monro Secundus and Mascagni were opposed to it; but, of recent years, it has been again very ably advocated by Fohmann, Tiedmann, Lauth and Panizza.

It has been long known that, when mercury is injected into those lymphatics which proceed on to a gland (*vasa inferentia*), part of it passes more or less freely into the neighbouring veins, as well as into the lymphatics leading out of the gland (*vasa efferentia*). This transmission is sometimes so very free, that, it is actually necessary to put a ligature around the veins, in order that the lymphatics may be well filled.

Various explanations have been given of this occurrence. Some writers have supposed that it was always the result of rupture of the glandular tissue; others have attributed it to a direct communication between the two sets of vessels; and lastly it has been conjectured that it might be owing to a mere transudation from one set of vessels to another.

It cannot indeed be doubted that, in not a few of the experiments, there has been an actual rupture of the substance, of the gland, and that the quicksilver has escaped into the cellular substance, and been forced into the lacerated vessels. But this has certainly not been the case in all. The greatest delicacy has been used by the anatomists last mentioned to avoid all force or compression in their experiments; and we cannot therefore fairly presume that extravasation of the mercury has always taken place. No traces of such extravasation have been observed; and moreover it has been often remarked that the veins were filled with the quicksilver even before the lymphatics, which issued from the gland, were injected. It may also be added, that, if an extravasation had occurred, we might reasonably expect that the small arteries as well as the veins should receive a portion of the injection; and yet this is never the case. M. Fohmann considers these arguments quite conclusive; and he has supported with great ability the doctrine, that there is in truth a direct communication between the lymphatics and veins of an absorbent gland. It must however be admitted that although there are some very plausible arguments in favour of this supposition, no direct observations can be adduced in its support. M. Panizza has mentioned one fact which seems to be very unfavorable to it. He says that he has never succeeded in injecting the lymphatics, when he reversed the mode of performing the experiment—viz. That, when the mercury was injected by the veins, none ever entered the lymphatics. This result might certainly have been expected, if there is really so direct a communication between the two sets of vessels, as M. Fohmann maintains.

Panizza therefore and Müller also are inclined to believe that the passage of the mercury, in the substance of the absorbent

glands, from the lymphatics into the veins, is probably effected by means of minute pores in the sides of the vessels, analogous to those which permit the atmospheric air to act upon the blood in the pulmonary cells.

Breschet however, without giving a decided opinion, appears to lean to M. Fohmann's hypothesis that there is a direct communication between the lymphatics and the minute veins within the substance of the absorbent glands—a doctrine that receives considerable support from the results of comparative anatomy, and also from the carefully performed experiments recorded by Meckel, Fohmann, and many others.

Whatever view we take of this subject, there is every reason to believe that during life, fluids may pass somehow or other from the lymphatics into the veins of the glands. If we admit this doctrine, we can readily understand in what manner certain substances may pass very quickly from the stomach and bowels into the mass of circulating blood, and be appreciable at different emunctories, within a very short time after they have been introduced into the alimentary canal.

"If," says M. Breschet, "after all the facts now detailed, we must admit that the lymphatics seem to have very little action upon substances introduced from without (the chyle excepted), they most unquestionably exercise such a power over those which are generated in the body. The bile, for example, may be absorbed by them—a fact indisputably proved by the researches of the two physiologists named above."

In concluding his review of the conflicting opinions on the subject of venous and lymphatic absorption, our author adds that the solution of the problem is perhaps less obscure, than has often been supposed. He supposes that the veins and absorbents communicate with each other in the substance of the glands, as they are seen to do in some of the lower vertebrate animals in various parts of the body. The chief point of doubt is, as to the manner in which this communication is effected. M. Breschet does not think that it can be by direct communication with each other by open mouths; but rather "*par une force absorbante, analogue à celle dont jouissent les radicules lymphatiques, que les veines doivent absorber le contenu de ces derniers vaisseaux dans les glandes.*"\*

In fine, he supposes that the veins of every part have the power of absorption, as well as the lymphatics; but he is unable to

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\* The doctrine—that there is a free communication between the veins and the lymphatics in the substance of the absorbent glands—is maintained by that admirable anatomist, M. Fohmann; and certainly the comparative anatomy of the lymphatic system, as we have described above, affords considerable shew of confirmation to it.



specify the limits and the circumstances in which each set of vessels exercises this function.

He alludes to a question of great obscurity, and which in all probability will always elude the search of our best-directed enquiries—viz. how and in what part are the globules of the chyle formed? We cannot suppose that they are already formed before the chyle is absorbed from the food, as they are known to be of considerable volume, and as no open mouths of the lacteals have ever been discovered in the villi of the intestines, even with the aid of the strongest magnifying glass. It is an utter loss of time to form mere idle conjectures on this subject. “*Ne craignons pas de dire,*” says M. Breschet, “*que l’on ignore complètement!*” There are many other points in the anatomy and physiology of the absorbent system, which are little, if at all, accurately understood; and we are therefore compelled to confess that we know but little, and that little only imperfectly, of one of the most important functions of animal life.

The following statement of the chief conclusions, to be drawn from the preceding remarks, may be useful to the reader.

1. In no part of the body have any open extremities or orifices of absorbents been discovered.

2. No direct communication between the arterial or venous capillaries and the absorbent vessels have been distinctly proved to exist.

3. Fohmann and some other anatomists assert that a communication exists between the absorbent vessels and the veins, within the substance of the alveolar glands. This doctrine, although probable, is not admitted by all.

4. The absorbents in fishes are not provided with valves, or with glands. They communicate freely, in different parts of the body, with the adjacent larger veins.

5. In reptiles the lymphatics have imperfect valves; but there are no glands. We discover however along their course certain dilatations which are seen during life to pulsate, and which appear to force the lymph into the adjacent veins.

6. Rudiments of absorbent glands are discoverable in birds; and in them there are several other direct communications between the lymphatics and the veins, besides the chief one at the root of the neck.

7. In mammals, the lymphatic system is more complicated; the valves are more numerous and more perfect; the glands are more numerous; and the communications between the lymphatic vessels and the veins appear to be fewer in number and much less direct.

8. The veins seem to have the power of absorbing foreign substances admitted into the body, as well as the lymphatics; but it is still doubtful whether they ever absorb chyle or any other fluid generated within the system.

### *The Anatomy of the Skin.*

The next of the works upon our list is still from the pen of M. Breschet, an able anatomist—and on the structure of the skin, an important subject. Unfortunately its difficulty is commensurate with its importance, and the discrepancies of observers have corresponded with its difficulties.

M. Breschet, and his colleague in the work, M. Roussel de Vauzème, have used all the means in their power for arriving at the truth. Time has been consumed and labour expended on an inquiry which all must acknowledge to be intricate, and which they confess to be on their part incomplete. They deprecate criticism, indeed they may be said to defy it, for they protest in limine that they will pay attention to no strictures but to those which emanate from persons who have made the structure of the skin a subject of their special investigation. This is a bold, but perhaps it is not altogether an unexceptionable determination.

They treat their subject in the following order. They first give a summary of the constituent parts of the skin, and then examine each in detail.\*

### *Constituent Parts of the Skin.*

1. The *Derma* (cutis vera—corium—true skin)—a dense, fibrous, cellular web, enveloping and protecting the sanguineous capillaries, the lymphatics, the nerves, and the other organs contained in the skin.

2. The *Papillæ*—the organs of touch, in which the nerves are finally distributed. They are small nipple-like projections, slightly curved, their spices blunted, and concealed beneath several envelopes.

3. The *Diapnogenous Apparatus*, (the organs of the secretion and excretion of the sweat—from *διαπνοή*. *trāspiratio perspiratio*)—is composed of a glandular parenchyma, and of *sudoriferous* or *hydrophorous* canals.†

The parenchymatous or secreting organ is enclosed in the derma, and gives origin to the excreting canals; the latter are of a spiral form, pass between the papillæ, and open obliquely on the external surface of the epidermis.

4. *Apparatus of Inhalation, or Absorbent Canals.* These resemble, in many respects, the lymphatic vessels. They are

\* We shall chiefly select such facts, or such opinions, for notice as possess some claim to novelty, or are otherwise important. We must presume that our readers have read Beclard's, or Craigie's, or some other work, which contains what is generally known or believed in regard to the cutaneous tissue.

†From *ἰσρως*, *sudor*.

situated in the corpus mucosum, which forms the most external layer of the skin, for the cuticle or epidermis is only a dependence of the mucous body. The inhalent canals appear to be unprovided with mouths or with absorbent openings. They commence in the most superficial layer of the cuticle, but their mode of origin is very difficult to be determined. By their other extremity they communicate with a net-work of vessels, which our authors believe to be lymphatics mixed with veins.

5. *The organs which form the Mucous Matter, or the Blen-nogenous Apparatus.\** This is composed of a glandular parenchyma, or organ of secretion, situated in the thickness of the derma—and of excreting canals, which issue from the preceding organ, and deposit the mucous matter between the papillæ.

6. *Chromatogenous Apparatus, or that for producing the Colouring Matter.* This is composed of a glandular or secreting parenchyma, situated a little below the papillæ, and presenting particular excreting canals, which pour out on the surface of the derma the coloring principle. This mingles with the soft and diffuent mucous matter, and it is their mixture that produces the “pretended reticular body of Malpighi,” and the epidermis or cuticle. We must attribute to this double apparatus the production of horns, scales, prickles, hairs, nails, hoofs, and so forth.

Our authors have ascertained, that of all the cutaneous expansion in man, the skin of the heel is the best adapted for anatomical examination, on account of the thickness of the derma and the mucous matter. To this part, therefore, their observations must be understood to apply. The anatomical causes of the difference displayed by different portions of the skin will be discussed at a future opportunity.

Such is the sort of table given by our authors of the anatomical elements which constitute the skin. The enumeration will at once convey to the well-informed anatomist the essential differences which exist between it and the ordinary descriptions of the cutaneous apparatus. On this point we need not dwell, but proceed to display the opinions of our authors in detail.

The body of the work is divided into six chapters. The first is on the derma—the second on the papillæ—the third on the diapnogenous apparatus—the fourth on the apparatus of inhalation—the fifth on the blenogenous apparatus, or organs which secrete the mucous and the horny matter—the sixth on the chromatogenous apparatus, or organs for the secretion and excretion of colouring matter. Appended to these chapters are some remarks on the pathology of the skin, and some conclusions.

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\* From *Βλεννα*, *μυζα*, *mucus*—



### *On the Derma.*

On this head our authors say little that is new ; and we shall confine ourselves to stating that the result of their observations amounts to this—that the derma is a membrane, the fibres of which, firmly interlaced with one another leave interstices, areolæ, or cellules, which protect and insulate a great number of organs. On its external surface it insensibly merges into a membrane, which appears to be confounded with the parenchyma of the colouring and papillary organs. The derma, according to our authors, is by no means the inextricable net-work of fibrous tissue which some authors have represented it to be. It contains and supports organs, the precise description of which will come by-and-by.

In serpents, the derma has a remarkable disposition : it is raised into imbricated prominences, covered by a thin layer of epidermis, and their whole constitutes the scales. In fish, on the contrary, the surface of the derma is uniform, and the scales are entirely composed of horny matter.

### *On the Neurothelic Apparatus, or the Papillary Bodies.*

There is no doubt that the filaments proceeding from the different nervous trunks in the subcutaneous cellular tissue divide to extreme minuteness on approaching the derma. However carefully we endeavour to dissect them, we most commonly lose them in the structure of the derma, by reason of *its* opacity and *their* delicacy. The only chance of distinguishing them, in the midst of the vascular net-work of the derma and of its excretory canals, is to observe very carefully the point where they enter and to which they tend, and with practice and dexterity the nervous filaments may be picked out as they approach the mucous body, where they are delicate, almost pulpy, and penetrate the base of the papillæ.

The papillæ themselves are ranged in rows, generally bifid or trifid, separated transversely by the interval in which the sudoriferous canals are lodged, and longitudinally by the grooves from which the horny or epidermic matter proceeds.\* Their form is that of a small cone, the base of which is lost in the derma, while the summit ends in a blunt point. Each papilla penetrates the horny matter, as a sword enters its sheath, and the internal surface of the epidermis exactly represents, by its symmetrical depressions, the number and disposition of the papillæ.

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\* The terms "mucous matter," "horny matter," are used almost indiscriminately, because the horny epidermis is supposed to be formed by a kind of inspissation of the external surface of the mucous matter. We beg our readers to bear this in mind when they find the term "horny matter" occur.

The attachment of the papillæ to the derma is firmer than that to the epidermis, so that if a little force is used, the papillæ separate from the latter, but remain in connexion with the former.

The direction of the papillæ in the epidermis is oblique, and slightly inclined. Besides a sheath which they get from the derma, the horny matter supplies them also with a sheath, which covers them in the manner of a hood. This is very dense in the heel. The summit of the papillæ is not perforated by any opening.

Our authors refer to the structure of the papillæ in the whale, which they say resemble those of man so closely as to make the same description applicable to both—as exhibiting their form and structure on an intelligible scale.

The papillæ of the whale, then spring from the derma in innumerable quantities, piercing the horny matter like a sieve, or rather making it resemble a series of organ pipes, perforated to give them passage.

Their length varies with the thickness of the skin in the different regions of the same animal, or in animals of different species.

The nervous twigs, though united sometimes in twos and threes on a common base, are always contained in a particular sheath furnished by the horny matter which is moulded on them. In its thickest part, the body of the nerve presents across the neurilema slight undulated striæ, which proceed from the base, become less distinct, indeed become confused, and wind to a kind of button-like termination, where they appear to unite in concentric semi-circles. This surface is smooth and uniform, and has no communication with neighbouring parts. Examination under the microscope, or in any other manner, discovers in the papillæ a white dense tissue, more easily torn than broken, analogous in all respects to the nervous. It is not possible to separate into fasciculi the striæ or undulated lines apparent on the exterior; but our authors have distinguished the opening of a nutritious vessel in the interior. In the papillæ of man they have found two, which appear to unite and form an arch. These vessels are distinctly perceived, when the papillæ are injected, and divided by a transverse section. Besides this, in the centre of the neurilema or sheath, there appears to be a whitish pulpy substance.

From these circumstances discoverable in the papillæ of the whale, our authors think that it is not possible to entertain a doubt with respect either to the structure or the sensorial functions of these bodies.

The papillæ of the tongue are usually considered as peculiarly adapted for the sense of taste, and, consequently, as essentially nervous. But if the papillæ of the tongue of the ox be carefully

examined, it will be found that they are enclosed in a horny case of greater or less thickness, which must be opposed to the exercise of such a function as that of taste. In the interstices, however, between the papillæ, there exist below a very fine epithelion true nervous papillæ (*tiges nerveuses*), similar, or nearly similar, to those which have been already described. The number of these latter is considerable, and it is in them, according to our authors, that the sense of taste exclusively resides. The common papillæ of the tongue are thought by them to be rather devoted to the function of touch, and even to that of triturating the finer molecules of the alimentary mass, and to render it, in consequence, of more easy appreciation by the papillæ of taste in their intervals. On this point our authors have not made up their minds, but intend to examine it with more attention hereafter.

On the whole, our authors conclude that it would be difficult to form any opinion but the one they have advanced on the nature of the tactile organ. On the surface of the derma there are elevations and intervening furrows. The former correspond to the nerves; the latter to the sudoriferous and inhalent canals, while the source of the horny matter is at their bottom. If the papillæ are not the organs of touch in the skin, what are?

The mode of termination of the nerves occupies the attention of our authors. We see the nerves under three points of view: 1. In the subcutaneous cellular tissue they have the usual characters of spinal nerves; 2. In the substance of the derma they become soft, flexuous, and capillary; 3. On the external surface of the derma they are transformed into symmetrical papillæ.

The question—What becomes of the neurilema of the nerves, on their entrance into the derma? naturally forms a subject of enquiry. Our authors suppose that the nerves become divested of it, and that it becomes blended with the derma. It is probable, however, that some sort of envelope still invests the nervous matter. What it is, if any, is dubious, nor is it necessary to follow our authors through their analogical speculations on the subject.

The essential organ of touch, then, consists of—

A. *A principal part*—the nerve of touch, terminating in a blunt point.

B. *Of accessory and protecting parts*—1, the derma, enclosing the nerve in its interior; 2, the papillary neurilema, furnished by the derma; 3, of a proper sheath, of peculiar and horny tissue; 4, of a fine layer of epidermia, covering the sheath, and indispensable for the exercise of the function of touch.

If any one of these conditions should be absent, or modified in a certain manner, the sense of touch cannot be exerted. It is evident that the derma, the dermic sheath, the proper sheath of



epidermis, are to the nerves of touch what the complicated apparatuses of sight and hearing are to the optic and acoustic nerves.

If we compare the senses of taste and smelling with that of touch, we must perceive a greater delicacy in the apparatus of the former, and a predominance of the horny covering for the nervous terminations and expansions in the latter. Touch, too, is exercised by nervous bundles, enclosed in a tissue which insulates each, whilst the nerves of sight and hearing are expanded at their termination.

Our authors examine the hypotheses which are entertained with regard to the ultimate disposition of the nerves. We need not go into a subject so intricate, and, we may add, so unsatisfactory. Their observations on the papillæ bear out, in some measure, the conclusions of MM. Prévost and Dumas, who have conceived that nerves end in a loop. In the papillæ, the microscope, if it may be trusted, represents the nerves as preserving their filamentous disposition till they arrive at the top of the papillæ with its horny covering, where they form concentric loops.

#### *On the Diapnogenous Apparatus, and on the Sudoriferous or Hidrophorous Canals.*

This exhalent apparatus occupies the thickness of the derma, and extends from its interior to the most superficial layer of the epidermis, where it presents an opening.

It is composed of a secreting parenchyma and of an excretory duct.

The parenchyma is situated in the thickness of the derma, and is surrounded with numerous capillaries attached to it. The form is that of a sac slightly swollen, from which issues a spiroid duct, which pursues its course in the derma, and issues from it by the infundibulum, or transverse fissure, situated between the papillæ; the duct then proceeds obliquely through the horny substance, in a corkscrew form, to without the epidermis, where its termination is indicated by a slight depression, or kind of pore, which may be remarked on the prominent epidermic lines.

The duct, as it passes through the epidermis, is rounded. The structure closely resembles that of the horny tissue, from which it is difficult to distinguish it. Its spiral form causes it to open externally by a very oblique opening, almost parallel to the plane of the skin; the opening itself closing by the mutual application of the superior and inferior walls of the tube. If we look at a drop of sweat as it exsudes, we shall see it preceded by an elevation of the epidermis, like a pump valve.

If a piece of skin be macerated, so that the epidermis can be

separated from the derma, we may see, with the naked eye, these excretory ducts indefinitely lengthen, like threads of spider's web. These are the spirals unrolled. When examined by the microscope, they present a surface covered with horny matter, which seems disposed in an imbricated manner on a central canal. We may distinguish very well, in this way, the issue of these canals from between the papillæ, and their penetration into the horny matter, which fills the funnel-like depressions between the papillæ. At their exit from the derma, the spiral tubes are accompanied by an inhalent vessel, which enters into the infundibular depression. The spiral, filiform tubes, when taken up with a pair of forceps and placed upon a moistened piece of glass, roll up, and form a sort of homogenous mucous mass, elastic and trembling like a piece of jelly. On stirring them, there are detached a great number of irregular polygonal scales. The sweat found in the secreting organ issues through the sinuosities of the excretory duct, which must also give exit to the insensible perspiration. Probably, say our authors, were we to watch the external orifice of one of these ducts when the body is heated in cold weather, we should find it smoke like the pipe of a stove.

This corkscrew disposition of the sudoriferous ducts in man, explains the anomaly of the epidermis transmitting the excretions, and yet appearing imperforate when examined separately. If the membrane is raised in the living body or the dead, the sudoriferous tubes are torn from the derma, retract, and close the opening in the epidermis, the spiral coiling on itself. If the epidermis is detached in several layers, each contains a fragment of the spiral tube, with its two openings, lying almost parallel with the plane of the layer, and not corresponding with one another.

The walls of the tube come into apposition, and in this case, as in that of the entire epidermis, an opening is no longer discoverable.

If the horny layer be sliced off, and if, before arriving at the papillæ, we squeeze the skin between the fingers as we squeeze a piece of orange-peel, we may perceive drops distilling from the pores, which correspond to the infundibuliform depressions between the papillæ, that is, to the situation of the sudoriferous canals.

Another experiment is mentioned by our authors, as evidence of the tubular nature of the spirals. If a hole is made in the horny matter of the heel, in a direction parallel to the plane of the skin, and if a little mercury is poured into it, and if then a thin slice of the exterior of the epidermis is taken off with a razor, and the mercury pressed over with the handle of the scalpel, the metal may be seen issuing by all the sudatory canals in the spot. We see the same thing in the palm of the hand and end of the fingers, when the sweat oozes from them.

Our authors have carefully examined the epidermis of the whale, in order to discover how liquids traverse it from within. Pressure of the fluid out of the sudoriferous tubes, always occasioned the elevation of a little valve of epidermis before it escaped externally. Our authors insist upon these facts, because, although exhalent vessels have been talked of, they have not been sufficiently described nor satisfactorily demonstrated.

After stating and commenting on the various opinions that have been expressed in reference to the sudatory canals, our authors remark that the recent observations of Eickhorn are among the most interesting and most satisfactory. Yet he has committed several mistakes. He believes them, for example, conical, with an infundibuliform opening and of sufficient diameter to admit of the introduction of a hair.

Our authors themselves allow that it is extremely difficult to ascertain the exact disposition of the sudatory canals, and that it has cost them much time and trouble to obtain the knowledge they have communicated on the subject. It is possible that they may hereafter be proved to be in error; but mere criticism, without a careful examination of the skin, and a repetition of experiments, will be insufficient to do so.

### *On the Cutaneous Apparatus of Inhalation.*

In order to examine this most satisfactorily, we must remove a thin slice of the epidermis,\* taking care to select a soft and white portion. The slice which has been removed is to be placed on a piece of glass with a few drops of water, and after we have satisfied ourselves that there is no extraneous substance along with it, we may proceed to dissect it with curve-pointed instruments.

The inhalent canals appear to be situated below the most superficial layer of the epidermis. They present the form of separate radicals spread out in the horny tissue, where they anastomose several times, and then penetrate the derma by the infundibulum of the papillæ, near the sudoriferous canals. All these vascular trunks, symmetrically arranged in the fissures between the papillæ, which they traverse, communicate in the derma below the papillæ with canals, forming a common plexus. Our authors confess that they have seen this termination of the inhalent canals very seldom; yet they feel confident that they *have* seen it.

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\* Our authors consider all external to the derma as epidermis. The most external layer of it, which we are here directed to remove, is the cuticle, or epidermis of most authors. When the most superficial layer of the epidermis is mentioned, the epidermis, of common parlance, is meant.



These vessels are of extreme tenuity, and ramify in the form of loops in a hard, elastic, resisting substance. They themselves break with great facility. When examined in the microscope, their colour is white and silvery, and they are crossed by diaphragmatic septa; a circumstance which establishes their analogy with the veins and the lymphatics. Sometimes they are knotty, at others they are smooth. They may be distinguished with a very weak lens, and even with the naked eye, on scraping the surface of the epidermis. They are occasionally long, and resemble very fine hairs.

In order to perceive the entrance of the inhalent vessels into the derma, we must lightly raise the epidermis. We may then, with the assistance of a magnifier, observe all the hidrophorous canals, accompanied with an inhalent vessel, the two being very intimately united near the derma, although they speedily separate.

With the microscope we may distinguish the difference between the two sets of vessels. The sudoriferous canal is the larger, covered with small imbricated laminæ, serpentine in form, and elastic. The inhalent vessel is smooth, silvery, straight or slightly curved, and traversed by a visible central canal, imperfectly interrupted by small septa. If the epidermis is separated too violently from the derma, the inhalent vessels are broken, and only the sudoriferous canals, which are capable of considerable elongation, remain. Another mark of distinction is this: the inhalent vessels have anastomotic ramifications, and a plexiform arrangement, which the sudoriferous canals have not.

Our authors mention an experiment which appears to them to indicate the existence of a direct communication between the vascular capillary system and the inhalent canals. If an injection is thrown into the main artery of a limb, it always stops at the derma. If, then, the skin is removed in thin slices, while pressure is made with a scalpel on the part that has been injected, the inhalent canals may be seen coloured in the horny tissue, as they ramify and anastomose beneath the most superficial epidermic layer. The sudoriferous and inhalent vessels cannot be dissected throughout their entire extent, on account of the resistance offered by the horny tissue, but the one may be seen in fragments by the microscope, and the other entirely by means of injections.

Whatever may be the colour of the horny tissue, the absorbent canals, the nerves, and the sudoriferous canals are always white.

Our authors have been unable to discover external orifices to these inhalent canals. They are disposed to think that fluids are first imbibed by the horny tissue, and then absorbed by the inhalents. Our anatomical readers need not be reminded of the

contradictory statements that have been made with respect to the orifices of the lacteal vessels. The difficulty of distinguishing the apertures of the cutaneous inhalents (should there be any,) must be very much greater. Our authors engage deeply in the examination of opinions on the nature of intestinal villousities, and of the lacteal apertures. But we need not follow them.

We may mention, however, the method of injecting the lymphatics of the skin adopted and recommended by our authors. Sometimes they have introduced the mercurial tube into a lymphatic vessel of the leg, and the mercury has run into the cutaneous lymphatics of the groin. This plan frequently fails. In other instances they have introduced the mercurial tube directly into the cutaneous tissue, at the point where they desire to examine the lymphatics, and to be certain of not mistaking the sanguineous capillaries for them, they have previously thrown very fine injections into the arteries.

*On the Blennogenous Apparatus—the Source of the Mucous Matter.\**

In order to examine this apparatus properly, it is necessary to select recent skin, injected and reddened with its blood. If the derma is white, either naturally or by maceration, nothing can be learnt from it.

The mucous matter of the skin becomes blended, soon after its secretion, with coloring matter, which occasions the various tints of horn, hair, scales, feathers, and so forth. The mucous matter and the horny matter are, as has already been observed, the same, the horny being originally mucous.

On examining the skin from within outwards, we find—

1. In the derma—

*a.* A *Blennogenous* apparatus, composed of a secretory gland, and of a canal which excretes the secreted matter, the mucus, which becomes horny matter by desiccation.

*b.* A *Chromatogenous* apparatus, composed of a secreting parenchyma, and of canals which excrete the product of secretion (squamous corpuscles).

2. External to the derma, and the joint effect of both these apparatuses.

*a.* The horny matter, or epidermis.

*b.* The hair, feathers, horns, hoofs, &c.

1. *The Blennogenous Apparatus.*—At the base of the derma we may distinguish small reddish glands, which, under the microscope or a common lens, appear knotted, irregular, and grooved by blood-vessels. They are enveloped in loose cellular membrane, and surrounded by small, transparent, adipose vesi-

\* *Blennogenous*, from *βλεννα*, mucus, and *γεννάω*, to produce.

cles. From the summit of each of these glands there issues a canal or tube, which traverses the derma, and opens at the bottom of the furrows remarked on it. The tube is invested by a prolongation of the thin cellular membrane which envelopes the gland. Capillary vessels or filaments may be seen adhering to the tube and to the glandular organ, into which our authors have seen a vessel of some size enter. The canals usually form a regular colonnade in the thickness of the derma. Sometimes the glands are placed at unequal heights, and appear to communicate with one another by means of intermediate canals. The ranges of excreting canals correspond to the furrows in the derma; they are perpendicular to the plane of the parenchyma secreting the colouring matter, to which we shall next direct attention.

2. *The Chromatogenous Apparatus.\**---This is situated on the external surface of the derma, at the bottom of the furrows seen upon it, below and between the rows of papillary eminences. Superficially it gives rise to a great number of short excreting tubes, which end and pour out a peculiar matter at the bottom of the furrows. On its deep surface it is in relation with capillary vessels, and with the excreting canals of the blennogenous glands.

Its structure is areolar, spongy, and tough. The parenchyma itself, as well as its excreting canals, easily redden on account of their vascularity. Here the arterial system stops; this parenchyma forming, in the natural condition of the body, its limit, though the vessels of the papillæ, strictly speaking, do advance a little further.

If we lacerate this tissue, we find in it innumerable little filament, from which escape scales or colourless corpuscles in abundance. This is the only reservoir of such scales in the derma, and this parenchymato-glandular tissue may therefore be regarded as a peculiar organ, peculiarly constructed, penetrated by arterial and venous capillaries, and giving rise to excreting canals. The latter terminating at the same point as those of the blennogenous gland, pour into the mucus formed by this gland granules of pigment or colouring matter.

3. *Excreted Products of these Apparatuses.*—The joint product of the blennogenous and chromatogenous apparatus is the epidermis, or the horny matter. Our authors examine it as it occurs in the heel.

The inferior or deep surface of the entire epidermis presents inequalities which correspond to the inequalities on the external surface of the derma. It exhibits, indeed, a cast of the latter. This surface of the epidermis has received the name of the reticu-

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\*Chromatogenous, from  $\chi\rho\omicron\mu\alpha$ , colour and  $\gamma\epsilon\nu\nu\alpha\omega$ , to produce.



lar web of Malpighi. Two divisions (cloisons) may be distinguished in it. One fills the furrows of the derma, and adheres to it by prolongations which issue from the excreting blenno-genous and chromatogenous canals. By this it is that the horny tissue is produced and renewed. When we attempt to separate the horny matter from the derma, we always experience a certain degree of resistance from this attachment to the furrows of the derma. Sometimes we may perceive the sort of roots sent into them, but, more commonly, they are indistinguishable, the horny matter coming off cleanly, as if only laid in the furrows. On the sides we may observe small holes, which give passage to the lymphatic vessels.

The other division of the horny layer, named by our authors inter-papillary, occupies the interval left by the bifid papillæ, and is prolonged into the infundibuliform depressions around the sudoriferous and inhalent canals. We may remark on the edges of these ridges of the horny matter, a lacerated appearance, occasioned by loose fragments of the sudoriferous canals. On the right and left may be found the holes and sort of sheaths into which the papillæ penetrate obliquely.

On the external surface of the epidermis there are visible prominent lines, slightly concentric or parallel, and separated by grooves. Examined with a lens, these lines present alternately small papillary eminences and fissures, or slight depressions, containing the orifices of the hidrophorous canals. A line contains usually from four to six. It may easily be ascertained that the prominent lines have an imbricated disposition, so that in the motions of contraction, more particularly of the hand, they advance over one another, like the scales of a fish or of a serpent, whilst in the motions of extension they separate and lay open the bottom of the grooves. This imbricated appearance is very manifest where the skin forms folds, as at the bend of the elbow, the groin, &c.

The horny matter in man is whitish, elastic, transparent, and highly hygrometric. Its examination is extremely difficult, for it gives under the scapel, like caoutchouc; when soft it swells, and nothing can be made out of it, and when dry, it scales off at the least touch or pressure.

The epidermis of the whale is more adapted for anatomical study. The horny matter is secreted by a special apparatus, and organized like false membranes. It seems then to deserve the designation of tissue, accorded to it by Bichat.

The *epidermic tissue* then of the *whale*\* is smooth, spongy, and generally of a deep slate colour. Proceeding from without

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\* Again we must observe, that epidermic, in our authors' phraseology, signifies all the horny matter above the derma. Cuticle is only its external layer.

inwards, there may be detected in it with the naked eye two layers—one external, and parallel to the plane of the derma; the other consisting of straight fibres, extending perpendicularly between the derma and the external layer. We may see through this dark tissue the summits of the white nervous papillæ enveloped in their sheaths. The internal surface is dotted with apertures for the passage of the little papillary cones.

The respective thickness of the two layers is as follows: that of the external or horizontal layer, one line; that of the deep or perpendicular layer, three lines. As the thickness of the derma on the head of the animal is ten lines, the diameter of the whole skin is about fourteen lines.

In order to analyse the epidemic tissue, we must take a perpendicular fibre, and place it under a magnifier, or a slightly moistened glass.

The tissue is thus found to be composed of small scaly imbricated bodies, on a fine cellular web. The scales are readily detached, and stain water black under appearance of granulations. A fibre is found of a series of these scales inserted one into the other. The fibre is elastic and resistant.

The origin of the horny matter may be well seen in the whale, on account of its black colour. It fills all the space unoccupied by the papillæ. The black matter is excreted a little prior to its appearance on the outside of the derma, about half a line internal to which point we find it inclosed in a capsule or dermic membrane, at the bottom of which may be remarked little whitish or filamentous projections, which the capsule embraces; these are the excreting canals of the chromatogenous parenchyma.

The horny matter is formed within, and has then almost a mucous consistence. It is protruded from within outwards, and pushes before it the previously-formed layers, which gradually solidify.

Our authors hang a good many observations on these facts; but we may waive the consideration of them, and having ascertained so much of the horny matter of the whale, return to its examination in man.

In order to examine the *horny matter in man*, the best plan is to place under a magnifier, in a little water, a portion of the most external epidermis, or of the mucus which is formed on the surface of the derma. If we then separate its component parts with the point of a scalpel, we may observe floating, in the midst of the fragments of inhalent vessels and sudoriferous canals, a number of apparently shapeless corpuscles. They are not really amorphous, this appearance depending on the violence employed either breaking them up, or leaving them partially agglutinated. In general the scales affect the form of an irregular trapezium,

are of a certain thickness, white, transparent, more or less striated, and disposed on a fine areolar web, in an imbricated order. We may easily recognize, say our authors, in the scales, the product of the chromatogenous or colouring organ; and, in the pellucid web which supports them, the mucus of the glandular blenno-genous organ.

The horny matter, excreted in the first instance in a fluid mucous state, moulds itself layer by layer on the papillæ, and envelops and protects the sudoriferous canals and the inhalent vessels, acquiring greater density as it becomes placed externally.

The horny tissue in the negro is black every where, excepting on the palm of the hands and the sole of the feet, where there are only slight traces of that colour. Its structure is the same as in the white race of men. On the heel of the negro the scales are colourless. In the rest of the body, the skin, when examined by a magnifier, is not so black as it appears to the naked eye. Over the papillæ it is white, in consequence of the white nervous matter shewing through it. The areolar web which supports the scales is always white.

*On the Chromatogenous Apparatus, or Organs of the Secretion and Excretion of the Colouring Matter.*

The mucous rete of Malpighi has been regarded as the sole seat of the colouring matter, which was said to be secreted by a vascular net-work, and collected and preserved in a semi-fluid form. Our authors adopt and present a very different view of it.

They have observed that if the skin is black or white, the free border of the scales is coloured black or white. The attached part of the scales and the cellular web into which it is implanted are always white, as are the parts accidentally contained in the epidermis, the nervous papillæ, the sudoriferous canals and the inhalents. The scales then are the only parts in which colour resides. They were led to compare this with the wings of the lepidoptera, and to examine the colouration of flowers. They discover and dwell on both as analogical cases; but we may pass these considerations by.

Their observations on the colouring organs in man are the following:—

1. They presume that the form of the scale plays some part in the production of the phenomenon. Have the negro and the cetacea, or should they have, a scale of similar form? That of the European is trapezoid. The little articulated pieces which compose the petals differ according to the colour they present and the kind of flower to which they belong.

2. The scale is in more or less intimate communication through its pedicle with its secretory organ, and is nourished by



a true circulation. It may therefore be considered as acting in a special manner on the fluid which is in contact with the pedicle by means of the areolar web to which it is attached.

It is certain that the colours are arranged with art in little compartments, so as to produce their optical effect. Our authors *presume* that the scale of the Negro is different in form from that of the European. Of course it ought to be so, to sustain their speculations. This consideration makes us wonder greatly that they have not found it so; for really, they have seen so much and so minutely that they might as well have seen this too. Indeed it is inexplicable, if they can determine the exact form of the scale in the white man, in which the corpus mucosum itself is seen with comparative difficulty, why they cannot determine the exact form in the black man. They have shown, we think, a little squeamishness in this instance. The coloring matter itself they admit to be formed by the glandular parenchyma to which reference has been previously made.

Thus the epidermis is not mere inorganic matter, or mucus mechanically expelled, but a tissue of complicated organization. It is connected with the important functions of exhalation and absorption, by the property which it possesses of suffering penetration by liquids; and this imbibition or endosmosis would seem to be the rudiment, or simplest degree of absorption in cutaneous and mucous surfaces.

The surface of the skin is marked with lines affecting geometrical figures, which have a fixed relation to the motions of the particular part. Thus, on the pulp of the fingers they form concentric circles—sinuosities in the palm of the hand—lozenge-shaped figures on the wrist, &c. These forms are such as are best adapted for the movements of the parts where they occur. As all the organs placed on the surface of the derma have an oblique direction, the disposition of all the epidermic coverings must of necessity be imbricated. We may remark this in the mode of implantation of the hairs.

If we look back on the anatomy of the skin, we may give the following brief sketch of its functions.

1. The blood carried by the arterial capillaries to the parenchyma that secretes the sweat, and returned from it by the veins, gives rise to the sensible and insensible perspiration.

2. Inhalents imbibe on the surface of the derma and in the epidermis extraneous fluids, and pour them into the lymphatics and the veins.

3. Nerves placed like sentinels on the surface of the body receive the impressions of touch.

4. Horny matter is secreted and moulded around the papillæ and the inhalent and sudoriferous canals. It is part of the apparatus of touch, a means of ornament and of defence, and emi-

nently hygrometric. By virtue of the latter property it is penetrable more or less, according to its density, by the fluids with which it is brought into contact, and so performs an important part in the function of absorption or imbibition, which it regulates.

5. The derma is the tissue which supports, insulates, and protects the delicate instruments of these various functions.

A short section, or, rather, a few observations are devoted to the Pathology of the Skin. They are not of sufficient importance to detain us. Nor need we enter on the critical exposé of what other authors have written. All that we shall add before quitting the subject are the conclusions of our authors.

They believe they have shewed that :—

1. There exists an apparatus of exhalation, composed of hydrophorous or sudoriferous canals, which have a spiral disposition, and open on the surface of the skin by one extremity, while their other extremity is in connexion with a parenchymatous or glandular body, the diapnogenous apparatus, in the derma.

2. The inhalent canals are situated in the mucous body ; they appear to be unprovided with orifices at their external extremity

3. The medium in which these exhalent canals are disseminated is on the external surface of the derma.

4. The mucous matter, which by its induration forms the different epidermic layers, is the product of a particular apparatus ; this is composed of a principal organ comparable to a gland and deeply placed in the derma, and of an excreting canal. The whole constitutes the blennogenous apparatus.

5. The epidermis or horny tissue resulting from this secretion and from its mixture with colouring matter, is traversed by the sudoriferous canals. The inhalent canals and the nervous papillæ enter it, but do not open externally.

6. A second apparatus, situated near the superficies of the derma, is devoted to the secretion of the colouring matter or pigment. This apparatus is composed also of minute glands and excreting canals. It constitutes the chromatogenous apparatus.

7. The matter secreted by the latter apparatus is mingled with the horny matter and its dependencies, and colours it.

8. The epidermis resulting from the secretion of the mucous or horny matter, and its mixture with the colouring matter, is disposed in successive layers. From this disposition results the scales of the superficial layer, or the *epidermis*, of most authors.

9. The apparatus of sensation in the skin, is composed of papillæ or conoidal eminences essentially formed by the extremities of nerves, enveloped in epidermic layers. The nervous filaments arriving at these new sheaths, throw aside their neurilemma, and terminate by anastomosing with one another in order to form arches.

10. A blood vessel, very inferior in size to the nerves, penetrates the papillæ.

11. The nervous filaments, although they lose their neurilema when they enter the epidermic sheaths, still preserve a proper membrane.

12. The derma is a fibrous and vascular web, which contains the organs of secretion, and the commencement of their excreting canals, the origin of the exhalent canals, and many lymphatic and sanguineous vessels. The latter are chiefly found on the two surfaces of the derma especially upon its inner, and form numerous networks, constituting a sort of erectile tissue. The blood-vessels do not penetrate the mucous body, and beyond the derma we only observe them in the papillæ, where they are delicate, not numerous, and difficult to be distinguished. We may observe, however, by the aid of injection and of magnifying-glasses, lymphatic vessels on the external surface of the derma, in the deepest layers of the mucous body, and around the papillæ. They are arranged in net-works, rather close; their terminating apertures cannot be recognized.

This closes the memoir before us. It is the first of three, and the only one which has yet appeared. The second will be appropriated to the description of the accessory parts of the skin—hair, wool, feathers, scales, nails, horns, follicles, &c. The third will be occupied with the structure of the mucous membranes, and with physiological observations on the functions of them and of the skin.

It is not necessary for us to pronounce an opinion on this work. None can deny to its authors the merit of great labour, research, and ingenuity. Whether their statements are strictly accurate—whether they have seen more or less than nature offers, we do not feel ourselves competent to determine. Those only can pronounce an opinion, who have subjected the skin to very close microscopical observations, which we have not done.

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*Signs of Death.* At the session of the French Academy of Medicine (7 Aug. 1837) a letter was received from M. Donné, who has of late devoted much attention to the microscopic study of animal fluids, stating that the most positive indication of death previous to putrefaction is derived from the change in the form and appearance of the globules of the blood. M. M. Breschet and Magendie were appointed a committee to examine into the subject and report to the Academy.



## PART III.

MONTHLY PERISCOPE.

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*Intermittent Fever treated by the Endermic Method.*

A man aged 33, was received into the Hôtel Dieu, on the 21st March. He had an interment fever which had lasted seventeen days; the first attack was caused by witnessing the sudden death of one of his companions. The fever came on towards eleven and lasted till four.

The 25th March, at nine in the morning, two grains of sulphate of quinine were spread on a small blister applied to the epigastrium. The fit returned, but was delayed two hours and a half, and only lasted an hour and a half instead of five hours. Two grains more of sulphate of quinine were applied to the sore. The 27th and 28th March, no attack; sulphate of quinine was however given internally, and there was no further appearance of fever.

Another patient with a similar complaint was admitted into the Hospital the 21st April; two grains of sulphate of quinine were applied the 25th, three hours before the supposed time the attack came on. No fever appeared. Two more grains were applied the following day, and four grains the day after; the medicine was then administered internally, and the man was cured. In several other cases a stronger dose of quinine has been applied, and the effects obtained have been nearly similar. M. Chomel has always *concluded* by prescribing a few grains of sulphate of quinine to be taken internally.—*Med. Chi. Review.*

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*Cancer of the Uterus treated with Acetate of Morphia applied Endermically.*

Madame Detty, aged 53 years, having all the attributes of perfect health; married at five and twenty; mother of five children; her labours were always severe; at the birth of the last child forceps were employed, and the infant was still-born. At the age of 51, she had a dartre (herpes) on the left fore-arm; sulphureous baths were ordered, and brought on an irritation in the interior of the womb, and an abundant menorrhagia. The treat-

ment at the hospital Necker proved fruitless. The womb was explored through the speculum, in the course of July, 1824; there was hard scirrhus unequal congestion on the neck of the uterus, it bled on the slightest pressure; there was a white discharge, with a fœtid odour; great difficulty in voiding the urine; the skin was yellow, and the flesh turgid and bloated. The patient grew worse in November, she was in agonies, rolled in her bed, and loudly invoked death as her only relief. Narcotics and the most powerful antispasmodics, strong doses of spirit of morphia, had no effect. The cruel sufferings were only allayed, and the blessing of sleep procured, by putting two grains of acetate of morphia on a seton. The application proved so soothing that her existence was prolonged till the 20th December, 1824, without any further sufferings. This observation proves that in cases where a cure cannot be hoped for, great advantages may nevertheless be found in external applications.—*Ibid.*

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*Rheumatism cured by the Application of Acetate of Morphia to a Blistered surface.*

A young man, named Choubert, aged 24, a baker by trade, was seized with such violent pains in his limbs, that he could neither move nor sleep. The patient attributed his complaint to excess of fatigue in kneading the bread, intense perspiration, and sudden cold after his hard work. On the fourth day after the appearance of the disease, the pains settled in the shoulder, the arm and left elbow, the limbs affected were perfectly motionless, a continual burning pain, the patient lost his appetite, and his countenance bore an expression of sorrow and suffering.

The 10th March, a blister was applied to the arm, but gave no relief. The 13th, the surface of the blister was covered with half a grain of acetate of morphia. Spent a good night, slight pain, no function disturbed. The 14th and 15th, same medication, same effect. The 16th, one grain of morphia, complete relief, no change in the functions, excepting slight contraction of the eyelid. The 17th and 18th, the applications having been omitted, the patient spent two bad nights, and suffered considerably. The 19th, one grain of morphia, the patient quite calm, but cannot raise his hand. The same means continued until the cure was complete.—*Ibid.*

*On the Action of certain Medicines on the Heart.*

Dr. Lombard of Geneva makes the following observations on the action of several of our most common Medicines :

1. *Assafœtida*. This is one of the most potent remedies against the irregularities of the heart's actions, when they depend upon a nervous or functional cause. Even when there is organic disease present, the internal use of assafœtida is often productive of very decided benefit, by checking, or at least moderating the palpitations, and by inducing a state of calm. When we prescribe the internal use of the medicine, we may administer it either in the form of pill or mixture. Three grains or thereabouts, taken twice or thrice a day, will be a sufficient dose in most cases. The most convenient form of employing it externally is that of a plaster applied over the region of the heart. The formula recommended by Dr. Lombard is as follows:—

Assafœtida, ʒij.  
Gum ammoniac, ʒj.  
Turpentine, gutt. vj.  
Yellow wax, q. s.—Misc.

2. *Camphor*. Given in doses of from three to twelve grains has a very decided influence in moderating any violent action of the heart. It also assists the heart in expelling its contents, when it is overloaded with blood, and cannot easily discharge it at each contraction of its ventricles. Hence in many cases of dilation, it is of great and very decided benefit. The following observations are so good, that we shall extract them in the author's words:—"This state of discomfort—from the heart not being able to expel the blood from its cavities, in consequence of their imperfect contractions—which is sometimes temporary, sometimes permanent, appears to be properly modified by camphor. A few days, even a few hours, have sufficed under this treatment to regulate the most violent ventricular contractions and shortness of breath, and irregular circulation ceases after the administration of a few grains of camphor. Is the action of this medicine sedative, or stimulating? This is a question on which I cannot presume to decide; but it is evident, after the researches I have made on the treatment of diseases of the heart, that care must be taken not to prescribe lowering medicines; and that the heart hypertrophied, but with obstacles at the orifice, or with dilatation of its cavities, must be considered as a muscle fatigued by the continual efforts requisite to maintain an equilibrium between the arrival and departure of this circulatory fluid; so that it *should be* strengthened, and its weakness counteracted by tonic medicines, and its action regulated by anti-spasmodic stimu-



lants. Thence the indication of steel and quinine in the first case, camphor and assafœtida in the second.

3. *Digitalis*. The sedative action of this drug is, at best, most uncertain and unsatisfactory. Its successful administration seems to depend upon attention to a multitude of circumstances, such as the state of the stomach, the mode of living, the amount of the dose exhibited, and so forth. If the stomach is in a state of irritation, digitalis seems to exert little or no influence on the action of the heart. Under these circumstances it very often induces sickness, nausea, and even vomiting. If this disagreeable effect is induced, we should try to arrest it by effervescing draughts: but if these fail, the use of certain antispasmodic, such as æther, oxide of zinc, the nitrate of bismuth, or even opium itself, may be found necessary.

If digitalis is administered with the view of subduing palpitations of the heart, the doses should be rather large, than small and frequently repeated. A grain, for example, of the powdered leaves, or three spoonfuls of an infusion, (a scruple of the leaves to six ounces of water,) may be given three or four times a day. The infusion is certainly the most potent preparation, and the one on which we can best depend. It is however more apt to induce nausea than the dry powder in the form of pills. As respects the corrigents of digitalis, we find the following remark of Dr. Lombard. "What best succeeds to avoid or allay the symptoms of saturation is calcined magnesia, subnitrate of bismuth, subcarbonate of steel, and oxide of zinc. Several English practitioners have prescribed powder of calcined magnesia. I have always employed it with subnitrate of bismuth, so that I am unable to remark on its action when administered alone. Subcarbonate of steel is the best adjuvant of digitalis; to this medicine may be attributed the absence of accidents to persons who have taken digitalis daily, during several months. Oxide of zinc also arrests the symptoms of saturation of digitalis."

4. *Polygala Senega*. This drug is perhaps too little used by medical men. Taken as an infusion, says Dr. Lombard, it appears to diminish the circulation, and regulate the ventricular contractions.

In persons affected with diseases of the heart, dilatation of its cavities, polygala has corrected the irregularity of the heart's pulsations, and has lessened the sanguine stasis which seemed to threaten the dissolution of the patient. The doses given, vary from twelve to twenty-four grains of polygala in the course of the day; an infusion prepared with a drachm, and four ounces of water, has been given in four-and-twenty hours.

*Nervous Headache cured by the Inoculation of Morphia.*

A woman admitted into the hospital Beaujon, was very subject to nervous headache. On a former occasion she had experienced great relief by the application of a blister to the temple, the blistered surface being afterwards dressed with an ointment containing some muriate of morphia. Dr. M. Solon made trial of the endermic use of morphia in a different form this time. He made eight punctures in the temporal region with a lancet impregnated with a strong solution. The patient was speedily cured, but felt inclined to sleep during the day.

It is chiefly to the researches of MM. Lemberg and Lesieur that the profession are indebted for having illustrated the good effects which may be derived from the application of various medicines to the skin deprived of its epidermis. One very great advantage of the practice is, that the most potent remedies may be sometimes used in cases, where the judicious physician might be unwilling to introduce them, even in the most minute quantities, into the stomach or rectum. Moreover the direct application of anodyne medicines to the seat of a painful affection will often succeed, when constitutional or general means fail of relief. It has been very well remarked—Why have medicines always something uncertain in their action? It is because they reach a surface ever varying in its condition, or the intestinal mucous membrane is irritated and covered with mucosities, or perhaps the stomach and bowels are full. In subcutaneous absorption on the other hand, the absorbent vessels (and perhaps also the capillary veins) are always in a free state, when the skin has been recently deprived of its epidermis.

Hitherto the endermic, or, as some call it, the inoculative method of treating diseases, has not been much attended to in this country. The most potent and available remedies are perhaps the vegetable alkalies; more especially the salts of morphia, strychnine, veratrine, &c.

We are indebted for the facts in this article to the late numbers of the Continental and British Medical Review, edited by Dr. Rioffrey, of which we have already spoken favorably. We trust that Dr. R. meets with the encouragement, which he deserves.—*Ibid.*

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## PART I.

### ORIGINAL COMMUNICATIONS.

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#### ARTICLE I.

*Spontaneous Cure of a Case of Amaurosis. Reported by*  
LAWRENCE L. COHEN, M. D., of Charleston, S. C.

The treatment of Amaurosis must depend on the causes that have produced the disease and be regulated accordingly. The great improvements and advantages of the modern plan of practice, is to be ascribed to the advancement of physiological and pathological science. The physician of the present day when called on to prescribe for any particular disease, gives such remedies as are consistent with the acknowledged laws of the functions of the animal economy. Not so, with the empiric of old; he, like the dogmatist of the ancient school of philosophy, had certain remedies and sayings that like the bed of Procrustes was adapted to any emergency. The "empirics of old saw without discerning, administered without discriminating and concluded without reasoning." Or how else can we account for and excuse their many follies. Thus history records the R of Vogel who "recommends a roasted toad as a specific for the gout; and that one may secure himself from angina by eating a roasted swal-



low. Yet how many have done both and been martyrs to these diseases. The propagation of opinions like these is the best evidence of the credulity of the age in which they lived. The ancient manner of treating Amaurosis was by taking an ox or sheep's liver, roasting it and imbibing the fumes through a funnel! How altered is the mode of proceeding in these days! We have no panaceas.—The age of specifics is gone, and the same remedies cannot be applied to the different forms of the same disease. Calomel and blood-letting are the means most relied on for the cure of the Amaurosis, yet no oculist will issue his dictum and say that these will effect a cure, for although he knows very well in some cases they would have a beneficial tendency, in other forms of the same disease they would be the most pernicious agents he could employ. Thus we say in regard to this disease, that we can offer no remedy that has an aptitude for all its varied forms, but that rather we must discriminate and give such remedies as are adapted to each individual type. This is the only plan of proceeding with a due regard to science, for we find "all sorts of persons amongst the amaurotic, from him whose vessels seem on the point of bursting with plethora and who has long revelled in the solid luxuries of the table, down to the emaciated victim of famine and intemperance, in all ages and ranks, and not unfrequently it happens, that by directing our attention to the history of the patient's mode of life, his previous pursuits and habits, we are enabled to detect the exciting cause of this complaint and by the avoidance of which for the future the cure may be greatly promoted."

CASE.—Mr.——, aged 21—Student of Medicine—general health good—pre-eminence of temperament, sanguineous—

*January 3d, 1836.* Attacked with severe inflammation of the conjunctiva of the left eye, which continued till

*January 6th.* When the inflammation extended to the right eye, so that vision was suspended in both eyes. The appearance presented was that of an enlargement and great degree of excitement in both eyes—the membrane albuginea was covered with blood vessels that appeared as completely engorged as if they were on the eve of bursting their confines. Used a wash composed of R. acet. plumbi gr. xx.—sulph. zinci gr. x.—aqua pluvia ꝑviii. M. the object of this was to reduce the pain and heat of the parts and subdue the excitement.

*January 10th.* Finding the pain still intense used in combination with the above lotion R pulvis opii gr. x. aqua pluvia ꝑviij. M. The patient continued to take in addition to the preceeding pil. hydr. grs. vj. at night—sulph. magnes. ꝑj. in the morning.

*January 14th.* The patient used the above remedies in the intermediate time and about this period all traces of the disease had departed—the inflammation had been completely overcome, the eyes assumed a healthy appearance, and the vision returned in a perfect state—patient resumed in good health his previous avocations.

*December 1st.* An interval of 11 months had now elapsed since the patient had experienced any inconvenience in his health—he had in the interim been engaged at his studies which he pursued with considerable energy. The over use of the visual function we regard as the proximate cause of this disease, conjoined with a hereditary predisposition of a determination of blood to the head.—At this period he complained of a constant giddiness in the head—a feeling of engorgement in all the cerebral vessels attended with severe pain over the frontal sinus and superciliary ridge.

But the eyes preserved their healthy appearance and the patient continued his studies, finding the optic organs executing with integrity their offices. In order to relieve the apparent congestion that had taken place applied 20 leeches over the superciliary arch—placed the patient on a course of pil. hydr. et. sulph. magn. for one week. *December 10th.* Finding no amendment in the painful symptoms this day 20 leeches were again applied over the same place as heretofore. *December 12th.* Pain still continued with unabated violence—applied leeches to the temples—back of the ears, and along the cervical region of the neck. *December 15th.* Patient now felt a diminution of all those disagreeable symptoms, and appeared perfectly well—during this attack the eyes evinced no undue sensibility to the stimulus of light—nor was there any orbital pain. At this period the eyes were examined with magnifying glasses but no deviation from a healthy hue could be discerned. *January 4th, 1837.* Patient had a return of all previous symptoms but in a more aggravated form—the pain over the superciliary arch was intense, that in the head constant and severe—the left eye appeared weak, and

evinced a keen susceptibility to light—to such a degree that no act of volition could open it on light being brought near—there was also considerable inflammation apparent externally in this eye—the sight of it seemed to be imperfect as if a dark cloud was before it—20 leeches were applied as heretofore—the eye kept moist with a solution of the acetate of lead; and hydr. sub. mur. grs. vi. given at bed time directed to be followed in the morning with sulph. magnes.  $\mathfrak{z}$ j. The patient's comfort required that he should be placed in a dark room which was accordingly done. *January 5th.* No material alteration—continued the above. *January 6th to 14th.* Finding no improvement in the patient's vision—directed blisters to be applied over the temple and behind the ears—placed the patient on a light diet abstaining from all stimulus. *January 15th to 20th.* During this interval repeated the above—kept the blisters open with the use of savin ung.—the pains had in a great measure subsided and the vision much improved. *January 25th.* Patient having returned to his usual diet had a recurrence of pain which ceased on a return to a vegetable regimen. *January 28th.* Much pain over the superciliary ridge but the vision perfect—gave as before sub. mur. hydr. et. sulph. magnes. *January 30th.* Symptoms relieved. *February 5th.* Constant, dull, uneasy sensation about the head—acute periodical pain over the eyebrow—a distended feeling in the vessels of the eyeball—and much evidence of biliary derangement which induced the opinion that the disease was primarily located in the digestive organs and acted on the head sympathetically, therefore prescribed emetics for six days consecutively, conjoined with local and general blood-letting. *February 12th.* Pains were now periodical and of great intensity. The vision was imperfect, thus, for example, if the patient looked directly forward at a person before him he would see his head from above the sternum and his lower extremities from beneath the pelvis, but the intervening space was misty and darkened. In Brewster's Letters, p. 36 we find a like case recorded, that of Dr. WALLASTON; "he says he suddenly found he could see but half of a man whom he met on the street and that on attempting to read the name of *Johnson* over a door, he saw only *son* the commencement being wholly obliterated from his view." It would be out of place to give the cause of these eccen-



tricies of sight, as our limits do not permit it. The object of treatment was now to diminish the force of circulation, therefore bled the patient in the arm—cupped over the temples and leeches behind the ears—also gave the tr. digitalis and pulvis antimonialis in order to decrease the force of arterial excitement—the patient still on low diet. *February 16th.* Bled—leeches and cupped again—continued the p. antimony. *February 25th.* Having without advantage treated the disease as located in the circulation—stomach—blood-vessels of the head—I determined to ascertain what advantage would accrue from directing attention to the nervous power—to fulfill this indication I used the conium maculatum and hydr. sub. mur. combined commencing with gr ʒj. of cicuta and cautiously increasing until ss. per. diem. was taken, the calomel was not increased in the same proportion as the indication was not to produce ptialism—the patient's system now having been brought under its influence to such a degree that nausea, vertigo and constant drowsiness was produced—discontinued its further use. *March 20th.* Mr.——— was now attacked with an intermitting pain that appeared to have the superciliary arch for its centre, and which radiated in all directions—the spasmodic action associated with this pain was intense—the attacks were most severe at night, coming on with increased violence after an hour's rest—the patient was unable to sleep after the first attack as these symptoms generally continued all night—Leeching—venesection—purgatives—emetics were prescribed without benefit, and relief was only obtained from the administration of morphia. No change in vision either one way or another—the appearance of the eye still continued healthy, so that it was difficult to determine which was the morbid eye—the right eye still continued free of pain and the vision perfect—the patient had long since discontinued his studies and ceased to exercise the visual faculty.

*April 1st.* No amelioration of the sufferings of Mr.——— or change in the state of vision—continued the morphia. *April 10th.* The spasmodic pains continued with unabated energy and as no benefit was derived from the various remedies, (besides those previously named) directed a change of air and diet and the mode of life—and to remove from a marine to an inland atmosphere—also to arouse an action in the whole system by stage and horseback riding. *April to May 5th.* Mr.———

remained in the country and derived much benefit although the vision was not improved—the exacerbations of pain were less violent and the paroxysms at longer intervals—during this time daily exercise on horseback was continued.

*May 10th.* Mr.—— returned to Charleston—no improvement in vision, but the recurrence of pains were seldom and they of slight intensity in comparison with their previous violence.

*May 20th.* The spasmodic pains now returned with more than usual violence—they appeared to have been only gathering strength to make their attacks with increased energy—only rest procured was by the use of morphia.

*May 30th.* No mitigation of previous sufferings. Mr.—— having obtained advantage from change of air, directed him to travel. *June.* During this month Mr.—— visited the northern states which produced no improvement in vision—the eye still continued to exhibit a normal exterior—the spasmodic pains were frequent as ever—on the return of pain he took morphia gr. ss nightly.

*July.* No material change worthy of note, except about this period the vision became more incomplete than heretofore—he being unable to distinguish a male from a female form.

The disease was by an eminent physician of the north considered as the result of debility and Mr.—— took the carb. ferri, the sulph. quinine as well as other tonics having been previously employed in vain—discontinued its use after giving it a fair trial.

*August.* No material alteration this month in the vision—Mr.—— visited the Saratoga Springs and drank freely of the waters in combination with pil. hydr. The pains had now nearly departed and when they returned they were of short duration and moderated in their grade of violence.

*September.* Pains had now left the patient and his general health was good—no improvement in vision. *October.* Mr.—— now returned to Charleston—general health perfect—no return of spasmodic pains for months—the eye presented a healthy appearance so much so that when medical gentlemen examined it they were unable to discern the healthy from the diseased member—inspections again made with glasses, nothing could be discovered indicating a departure from a natural condition. The sight of the left eye was completely suspended, but Mr.—— declared he felt no inconvenience as he found the sight of

one eye ample for the discharge of the offices of life. Made attempts with electricity but derived no advantage from them. *November.* Patient in good health resumed his studies in part, thinking that perhaps a moderate but not a prodigal exercise of the eye would be advantageous. *December 16th.* Without any change in mode of life, diet or the use of any new remedial agent the complete use of vision in the former diseased eye returned. 'The right eye from the commencement to the termination of this disease has never been implicated.

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## ARTICLE II.

### *Vital propensities of Arteries leading to inflamed parts.*

Professor ALISON has, with the assistance of others, made extensive observations on the subject of the tonicity, or vital power of contraction in arteries, "which acts in all cases when a living artery is emptied of blood—determines the degree of contraction observed in arterics for some hours after death, and is the only vital power ascertained by unequivocal experiments to exist in the arterial coats. His experiments have been made by actual measurement on arteries of sufficient size for this mode of investigation, and by the microscope in the minute vessels of inflamed points themselves. The experiments by measurement were, for example, such as this:—Sections of the axillary and humeral arteries precisely corresponding to one another and about 2 1-2 inches in length were taken from a horse which had first been bled to death, but which had for eight days suffered a violent inflammation attended with great pain and swelling of the right knee-joint of one of his fore legs. These sections of arteries were examined as soon as they could be taken from the body. "The artery of the diseased limb, when taken out of the body was, as in all the other cases, found to be decidedly the largest, measuring at the lower extremity of the portion taken 12-S of an inch in circumference of the arteries from the sound limb at the corresponding points were 11-S and 5-S only." &c. Hence Professor A. concludes that the tonicity, or vital power of tonic contraction is absolutely *diminished* in all the vessels leading to an



inflamed part; and lays "it down as a general fact that all the vessels concerned in any local inflammation, are in a state of *relaxation and distension*, as compared with their natural condition."

Of the truth of these experiments, we cannot for a moment allow ourselves to doubt. The facts, we feel no disposition to scrutinize. And, whilst we would not deny the *possible* correctness of the deductions thence drawn, we must be allowed to consider that they are neither *necessarily correct, or true* results of the reasoning in the case; nor *conclusive*, either for physiological or pathological purposes. If the vasa vasorum of the arteries of an inflamed part were engorged, or in a state of congestion, what would be the effect on the caliber, and consequently on the circumference of the artery? It is evident that these must both be increased. Nor would this be all. In consequence of the increased compactness of the coats of the artery, they would also be rendered more fixed—having their elasticity altered from their healthy condition by their greater firmness preventing that attenuation which elastic substances undergo on distension or extension, as a bag or strip of india rubber, or indeed as the coats of the arteries themselves when put on the stretch. And we would ask, if another experiment of Professor ALISON does not go far to justify the doubt we express of the correctness of the conclusion, that in all the vessels concerned in local inflammation there is *relaxation, &c.* We must be excused for scrutinizing somewhat closely the conclusions in point, before we receive them as correct, when the bearing of the principle on pathology and on therapeutics, if established, is duly considered; for it is most obvious that if "a *diminution* of vital power," or "a state of relaxation" of vessels in common inflammation be established, *there must* be at once a subversion of most of the therapeutics in such cases, and the sum of treatment be made to consist of tonics, stimulants, astringents, &c. to the exclusion of antiphlogistic and depletory means now universally in prescription.

The experiment to which we just alluded as tending to justify the doubts we have expressed, is the following:—

In the experiments of Professor A. bent tube and stop-cocks were used in the manner practised by POISSEULLE to try the contracted power of the vessels.\* Professor A. tried "the

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\* See Journal de Physiologie vol. viii.

strength of the arteries by their reaction on water distending them in two ways :—First, the second limb of the tube was filled with water, and the space occupied by the quantity expelled on the contraction of the artery was measured. The artery of the sound limb was found to expel just five inches of water; that of the diseased limb .35 inch only. Secondly, what appeared to be the more accurate mode, the water was made to fill the second tube only to a given point, and the rise of its level, on the expulsion of that contained in the distended portion of the artery, was accurately measured, and amounted to 1.75 inch in the case of the artery of the sound limb; and 1.25 only, in the case of that of the inflamed limb. The column of mercury used to make the distension was exactly the same in the trials." Hence it seems proved, as well as any experiment could be devised for that purpose, that the inelastic, or fixed state of the diseased vessel, and not its "*relaxation*," nor "*its loss of vitality*," is the true pathological state.

We refer to another experiment of professor ALISON for the justification it affords, of our doubt :

"Two portions of the axillary arteries, (of a horse having an inflamed leg,) each eleven lines long, were successively fastened between two bent tubes, and distended with water, by the pressure of a column of mercury of about ten inches, introduced into one tube, and then allowed to react on the water distending them, so as to raise the level of a column of water in the other tube, to a degree which could be accurately measured. The result was, that the reaction of the artery of the sound limb raised its level by sixteen lines, and that of the artery of the inflamed limb raised it only ten lines." Hence we consider the inelastic state of the vessel only is proved.

Another experiment made with great care and accuracy by Dr. SPITTAL, one of the assistants in Professor A's. investigations tends, not less, if not considerably more perfectly to establish the position we have taken, than either of those to which we have referred. It was an experiment for determining "the relative circumference of these portions of arteries at this time, and again after a lapse of about twenty-eight hours, when the *post mortem* contractions dependent on the last exertions of their tonicity were over. The artery of the sound limb was then found

to have dilated itself again from 33.24 to 41.24;—while the artery of the inflamed limb had dilated itself only from 36.24 to 42.24, at the corresponding point; so that the difference in the artery in its contracted state immediately after death, and its perfectly dead state, was 8.24 or 1-3, or 1-3 in the sound limb, and only 6.24, or 1-4 in the inflamed limb: and in other parts of the arteries it was obvious, that the difference of caliber between the vessel in its concentrated state immediately after death, and its subsequently dilated state, (which is the measure of its last exertion of tonic power of contraction,” or rather its entire loss of power,) “was considerably less in the inflamed, than in the sound limb---the vessels approaching more to equality of caliber at the second examination.

The final sum of the investigation, Professor A. believes to be as follows:

“It appears, therefore, as the the uniform result of all the modes of examination we have been able to devise, that the actions of inflamed parts, examined at different parts of their course, and at various periods of the inflammation, and when they are pulsating apparently with unusual force, are in fact *relaxed* or weakened arteries, transmitting, in consequence of their weakened condition, the impulses given by the heart with less modification than it receives in passing through the arteries of sound parts, but themselves exerting a less power of contraction on the blood than they do in the sound state.”

But whatever may be the physiological, or pathological errors into which the Professor may have been drawn, his honesty and good sense, and his unwillingness to sacrifice truth on the altar of self-love, are fairly set forth in the following very sensible observations, which we take great pleasure in giving place.

“This being ascertained, that is to say “the *relaxed*” and “*weakened*” state of the arteries in inflammation, the question immediately presents itself, whether this weakened state of the vessels is an adequate cause for all the changes, as to the movement of the blood, which takes place in the inflamed state, *i. e.* whether inflammation consists simply in a weakened action of vessels. I formerly mentioned one striking fact, on which I think there can be no doubt, as sufficient to indicate that this question must be answered in the negative,—viz. that two distinct and nearly opposite changes are ascertained to take place in the movement of the blood through an inflamed part,—a retarded



movement in the vessels most immediately concerned, and an accelerated movement and greatly increased transmission, in all the surrounding vessels.

"I shall take the liberty of adding one or two considerations, in confirmation of the opinion, that this diminution of the contractile power of the arteries, although the only change perceptible in their mode of action, is quite inadequate to explain the simplest and most essential phenomena of inflammation.

1. If we suppose inflammation to consist only in an altered action of vessels, and this alteration to be of the kind which these observations indicate, we make no attempt to explain the difference between inflammation, with effusion of lymph, and simple determination or congestion of blood, where no unusual product issues from the vessels. Now this appearance of the peculiar *products* of inflammation, exuding from the vessels, is what the pathologist regards as most truly characteristic of the inflamed state; and I believe it to be certain, that in the usual effusions, consequent on healthy inflammation, the fibrin is both in much larger quantity, and shows a *greater attraction of aggregation*, than in any effusions from uninflamed vessels. Of this we have a familiar example in the case of the lungs, which we often find not only infiltrated with effused serum, but so far condensed by congestion of blood, as to be impervious to air, and not crepitate when cut, without being so far increased in density as to sink in water; but so far as I have observed, whenever we see the granulations of decolorized lymph in the air cells, truly characteristic of inflammatory effusion, then we are certain of seeing this decisive proof of the increased density of the lungs.

2. If we suppose inflammation to consist merely in that relaxed condition of vessels which is indicated by these observations, we must suppose the usual *causes of inflammation* *e. g.* mechanical injury, to produce, very rapidly, in all the vessels adjoining and approaching to the part to which they are applied, this state of relaxation or weakness, and to be effectual in exciting inflammation, only inasmuch as they diminish the vital power of those vessels. Now this depressing or sedative effect on vital power is not only just the reverse of the effect produced by such agents on the living parts, whether irritable or sensible, but is just the reverse of the effect produced by such agents on arteries themselves, when they are applied in such a manner as directly and exclusively to irritate their coats; as in the experiments of Vershuir, Dr. Thomson, Dr. Hastings, Wedemeyer, and others, where the contractile power of arteries was decidedly excited by irritation, their calibre in consequence *lessened*, and the transmission of blood through them *impeded*.

"The more this subject is considered, the more distinctly, I think, must it be perceived, that the only way to escape from

these various difficulties is to suppose, that the causes which excite inflammation do so by really exciting or increasing a vital action, but not an action of the nature of contraction; that the idea of the vessels of inflamed parts taking on an increased action is a delusion; that what is truly excited is an action not *of the vessels* but *within the vessels* of the part affected; that it is an increased exertion of powers by which the blood is moved, or its motion influenced, in the capillaries, but which powers are inherent in the blood itself, dependent on, or influenced by, its relation to the surrounding textures, but independent of any contractions of living solids: and the increased exertion of which powers leads always to distension, and to more or less diminution of the tonic power of contraction, of the vessels, within which it takes place."

## ARTICLE III.

*Remarks on Convulsions, by L. A. DUGAS, M. D., Professor, &c. in the Medical College of Georgia; contained in a Letter to the Editor.*

DEAR SIR—The seventh number of your useful journal, (vol. II. p. 428,) contains an article of considerable interest, not only because it suggests a new treatment for a dreadful class of diseases, but also because an attempt is made to generalize from the single fact it contains. I allude to M. TROUSSEAU's "compression of the carotid artery in the treatment of convulsions." There are few physicians for whose views I entertain more regard than for those of M. TROUSSEAU. He is a man of industry, erudition, and genius, and a teacher of great tact and ability; all of which circumstances give weight to his observations. Yet the article before us is, to me, too exceptionable to pass unnoticed.

In order to discuss this subject, it is necessary to admit the correctness of the inference, that the cessation of the convulsions was a *consequence* of the means employed; an inference which cannot be too cautiously made with regard to the action of a new

agent in an isolated case, and especially in the treatment of infantile convulsions, which frequently cease spontaneously, whereas they much more rarely continue unto death. But the admission may be made, and a very different rationale offered than that suggested by M. T. Our author states that he compressed the primitive carotid against the side of the trachea, and in this manner prevented the accumulation of blood in the left hemisphere, and, consequently, diminished the congestion, which he regards as the *cause* of the convulsions. Now I would ask if it be possible to compress the carotid, without at the same time compressing the internal jugular vein? nay, is it not more probable that the sluggish circulation of the jugular would be thus arrested, than that the great force of the heart's contraction should be overcome in an artery so near it? Indeed the proximity of these vessels is such that it would seem impossible to exercise any pressure on the one without at the same time compressing the other, and, inasmuch as the venous circulation is more readily impeded than the arterial, it is but fair to conclude that in this case there was rather a suspension of the former than of the latter. Such being the fact, it follows that so far from congestion being prevented, it was actually increased; and this leads us to the consideration of the pathology of convulsions.

It is evident that M. T. in common with most writers, regards congestion of the brain as the great cause of convulsions, yet we have seen that the means proposed and affirmed to have arrested them, must necessarily have increased this state of things. This result fully comports with my views of this disease, for I have long since entertained the belief that the congestion, so apparent during convulsions, is the *effect*, and not the *cause* of the muscular contraction. Observe the sequence of phenomena, whether occurring in an epileptic sufferer, a hysterical female, or a teething child: the patient will most generally be seized with convulsions without the least previous indication of cerebral congestion; the violent contractions of the muscles propel towards the heart the venous blood contained between them, at the same time that the function of respiration is impeded by the deranged action of its muscles; the heart beats violently, but cannot relieve itself of the great afflux; the veins of the brain, like those of the general surface; uncompressed by muscles, become en-



gorged, and congestion is the result. When this has been carried sufficiently far materially to compress the brain, the convulsions cease, the patient is left comatose, with stertorous breathing, and indeed with all the symptoms which characterize compression under other circumstances; nor will the convulsions return so long as this state continues. When they do recur, it is only after the brain has been relieved, the coma and stertorous breathing have disappeared, and consciousness has been more or less restored.—It really seems to me impossible to contemplate a succession of convulsions in the same individual, without being impressed with the influence exercised by congestion, or rather compression, of the brain, in the arrestation of muscular contraction. But, independently of this kind of observation, we have the testimony of all the experimental and pathological facts attending unequivocal compression of the brain, all of which concur in proving that compression never *occasions*, but always *arrests* or annihilates muscular contractions.

Will it be urged that a slight degree of congestion will occasion convulsions, whilst a degree sufficient to produce compression will arrest them? Were this the case, convulsions would be one of the most common occurrences of life, for there is perhaps no organ in the body whose circulation is more fluctuating than the brain. Every man of ordinary observation must be familiar with the symptoms which indicate a rush of blood to the head, and which vary from mere giddiness to apoplectic stupor. Congestive apoplexy is never attended with convulsions; the whole muscular system, on the contrary, is in a state of relaxation, bordering on paralysis, and this continues until the equilibrium of the circulation be restored. The fact that the congestion is increased by the convulsions, did not escape the observation of M. T.; and, in order to make this accord with his theory, he infers that the congestion which *causes* convulsions is active, whereas that *resulting* from the convulsions is passive (p. 431.) It is difficult to perceive the difference between these two states.

What then is the pathology of convulsions? The question though one of difficult solution, should not be abandoned. We know the normal contractions of the muscles to depend on a certain influence transmitted by the nerves of motion, and that in the healthy state this transmission is subject to volition. The

only difference then between the normal and morbid contractions is to be found in the cause of the transmission of the nervous influence. This cause in the one case, is volition; in the other it is more obscure. Convulsions arise from a vitiated transmission of the motor fluid, if we may use the expression. It becomes a matter of importance to determine the causes which lead to this vitiated innervation. In epilepsy and the majority of infantile convulsions, the derangement affects but one side of the body; whilst in hysteria &c. the entire muscular system of animal life is convulsed. There are cases again in which the vitiated innervation is manifested alone in the upper or lower extremities, or in but one of them.

Among the remote causes known to produce such derangements of innervation, the most prominent is the hereditary nervous susceptibility, so often and manifestly transmitted by parents afflicted with epilepsy, hysteria, &c. The proximate causes are as numerous as the irritations to which the various organs may be exposed. The nervous susceptibility being most exalted in infants and adult females, we find that these subjects are the most prone to convulsions. The reverse obtains with regard to adult males, who are most disposed to cerebral congestions. It has been remarked by the physicians attending the insane hospital of Charenton, that *congestive* apoplexy scarcely ever occurs among the females, though it is very common among the males. The same observation has been made at Bicetre and at La Salpêtrière. In the former institution, containing males alone, congestive apoplexy is of very frequent occurrence; whereas in the latter, the inmates of which are exclusively females, it is seldom ever seen.

If cerebral congestion be the cause of convulsions, how can we explain the production of these by excessive hemorrhage? They may be induced by immoderate venesection under a variety of circumstances, but especially after prolonged intoxication. All practitioners know that they not unfrequently occur during the most profuse hemorrhage in child-bed.

I am aware that post-mortem inspections reveal, in some instances, great cerebral congestion and even effusion, but, in the majority of cases, no lesion of the brain can be detected. Were congestion observed in every inspection, it would only prove that

there had been a great increase of blood in the brain, and not that this congestion occasioned the convulsions. It is but a natural consequence of these.

Convulsions have been divided into idiopathic and symptomatic; but this division should be regarded merely as distinguishing those whose immediate cause eludes our researches, from those whose immediate cause is more apparent. To the former class belong epilepsy, hysteria, chorea—to the latter, puerperal convulsions, those occasioned by the irritation of dentition, by the presence of worms or indigestible substances in the alimentary canal, and, in short, by any acute affliction.

In order that prescription be beneficial, it is absolutely necessary that they be predicated on correct pathology and unerring diagnosis. In the class of diseases under consideration, if congestion of the brain be the correct pathology, there can be but little uncertainty in the diagnosis; but if the pathology be such as I have endeavoured to prove it, the diagnosis must be as difficult as it is important; for, instead of one exciting cause, there will be many, and no correct treatment can be instituted until the acting cause be determined. Our bed-side investigations should be minute in proportion to the difficulty of the diagnosis, and in none more so than in cases of convulsions. If the method of interrogating in succession each organ, as advised by ROSTAN in his able treatise on diagnosis,\* be adopted, the task will be materially facilitated, and it will be found that the treatment should be oftener directed to other organs than to the head. The brain, instead of claiming our primary attention, will only need be watched, lest it suffer secondarily.

I would not be understood as affirming that affections of the head, either acute or chronic, never occasion convulsions, but merely that these do not and cannot result from mere congestion or compression. If a blow be received on the head, fracturing the cranium and plunging spiculæ into the membranes or the brain itself, convulsions will very frequently be induced; but the same may be said of irritations of any other organ or tissue. As I have already observed, the mere irritation of a tooth making

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\* See an extract of ROSTAN's work, translated for this journal, vol. 1—p. 166. et. seq.



its way through the gums, of the presence of worms or indigestibles in the alimentary canal, &c. may induce them in a subject of intense nervous irritability. Remove the spiculæ, scarify the gums, or expel the offenders from the bowels, and the convulsions will cease.

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## PART II.

### REVIEWS AND EXTRACTS.

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#### *Hydrocele.*

This disease seems to have attracted of late the consideration of surgeons with unusual effect. In times past, it baffled the efforts of the surgeon on every hand; frequently recurring after tapping, and requiring frequent repetitions of this operation. As the spirit of improvement was extended to its treatment, sea-tons, and the introduction of extraneous substances, as balls of dough, clay, &c. for exciting inflammation and obliteration of the cavity were used. These tedious processes, though often ultimately successful, were soon superseded by the more expeditious plan of puncturing with a trocar for discharging the contents, and introducing through the canula a suitable mixture of wine and water to excite adhesive inflammation. This practice has continued, with little variation, until the present time, and has been found efficient with great uniformity. Moreover, it is expeditious. The only difficulty attending its adoption, has been that of effecting a good injection into the sac; infiltration into, and violent inflammation of, the cellular layer of the scrotum, being sometimes unavoidable. Still a very partial injection into the sac generally effected its entire obliteration. But even this difficulty has been completely met in the finely adapted canula and elastic bag now sold in the hydrocele cases. With this apparatus, and a proper state of the patient for the opera-

tion; doubt of expedition, safety and success may not be entertained in the least degree. It is the real merit of this operation which has kept the profession so quiet on the subject for the last twenty or thirty years, and there is much reason to doubt whether any plan of treatment has been, or will ever be discovered, calculated by its real merits to supplant the present operation.

But many new plans of operation have lately been suggested and adopted with more or less success. The following are the principal proposed improvements :

*New Treatment of Hydrocele, with cases by Professor VEL-  
PEAU.*

Having learned that the preparations of iodine have been employed successfully as topical applications in hydrocele, I thought of trying them as an injection in that disease. For this purpose I used a solution or a mixture of water and the alcoholic tincture of iodine, (one or two drachms of the tincture to an ounce of water). After having emptied the cyst by the ordinary puncture, I injected from one to four ounces of the mixture just mentioned. It is not necessary to fill the tunica vaginalis, since by pressing the tumour we can force the fluid in contact with every part of its internal surface. The mixture is then withdrawn immediately, without, however, fearing to leave a small quantity of it. As it is not necessary to heat this remedy, nor to fill the cyst, nor to withdraw the fluid entirely, the syringe generally employed for injections into the urethra will answer. After the injection, the patient may not be confined to his bed. The part is swollen for two or three days, without causing fever or any serious pain; resolution then commences, proceeds generally with rapidity. I have employed this method in twenty cases; none of the patients experienced the slightest accidents. Eighteen of them were cured in less than twenty days; in one the resolution was only half accomplished on the thirty first day, I recommenced the operation and the cure then took place rapidly. The twentieth case remained in the hospital six weeks, in consequence of an engorgement of testicle. Two cases had been operated upon unsuccessfully by the vinous injection and by cauterisation; two had an encysted hydrocele of the chord; in three the tumour contained about 12 ounces of serosity; in ten the testicle was in a state of hypertrophy, was nodous, and had been diseased for some time; in all, except two, the disease had existed for more than six months; two had been affected for more than 15 years, and one for more than 20 years.

The 2d and 3d cases prove that under the influence of this

injection, an encysted hydrocele of the cord may be radically cured in ten days, and that five days are sufficient to effect a cure of certain cases of hydrocele of the tunica vaginalis.

It will be seen, by the following facts which I have selected from the twenty cases, what are the consequences and the result of this new method in the different varieties of hydrocele.

CASE 4th. Hydrocele of tunica vaginalis : vinous injection. Relapse, iodine injection : an ounce of the fluid left in the cyst. No previous preparation. Cure in fifteen days.

A young man aged 19 was brought to me at La Charité by M. Artaud de Beaufort in the month of October, 1836, for a disease of the scrotum which had existed two or three years. A tumour had arisen without any appreciable cause and slowly, in the left scrotum ; it was indolent, tense, moveable, *heavy*, more voluminous than the first. The fluctuation was obscure and a transparency was seen only at the external and anterior half. The testicle and epididymis were placed internally, were the seat of some lancinating pain, appeared hard, much swollen and altered. Every thing however indicated that the disease was entirely local. The young man was unwilling to remain in the hospital. He was operated on fifteen days after, by a physician who employed the vinous injection. An inflammation and intense reaction ensued and confined the patient to bed for fifteen days. The swelling diminished subsequently for fifteen days, and from that period remained stationary. Various discutient applications were employed but unsuccessfully until the end of October. The patient returned to me in the month of November : the tumour was rather larger than the fist and presented the same characters as before, except that the transparency was no longer complete and that the weight was less considerable. He consented to an operation on condition that I would suffer him to return home immediately afterwards. A tumbler full of serosity escaped from the tunica vaginalis. I injected an ounce and a half of water containing two drachms of the tincture of iodoine. After having exerted pressure upon the scrotum, I allowed about half the injection to escape. The other half remained in the cavity. The canula was withdrawn, the patient went home and returned to me the sixth day. At that time the swelling began to subside, no fever had supervened, the patient had not been confined to his bed, and had not changed his habitual regimen. He wears a bag-truss and makes use of saturnine compresses. The 15th day no fluid can be perceived in the tunica vaginalis. The tumour exceeds only by one third the volume of the right testicle. At the present moment, January 15th, 1837, the cure remains complete.

CASE 5th. Hydrocele of tunica vaginalis, cauterisation, relapse, iodine injection. Cure in fifteen days.



M. Sylva, a Brazilian, aged 22 years, student of medicine, of a good constitution, had five years ago a hydrocele of the right side, for which he underwent an operation by means of caustic, two years since, but which re-appeared soon after on the same side. When I examined him the tumour had the volume of the head of a foetus in the sixth month. The testicle and epididymis were flattened, slightly knotted posteriorly and in their natural place. A transparency perceptible in 4-5 of the mass which is light and pyriform. The cord and all the abdominal organs in a healthy state. The cyst was very thin, entirely indolent, and embarrassed the patient only in consequence of its weight and volume.

The operation was performed December 8th, 1836. I introduced the trocar at the point of selection. Eight ounces of serous fluid escaped through the canula. I ascertained that the epididymis preserved nearly its natural thickness, but was twice as large as usual. The volume of the testicle was on the contrary sensibly diminished, but without any other evidence of alteration. A mixture of six drachms of the alcoholic tincture of iodine to four ounces of water, had been previously prepared. The cauterisation having already failed, I resolved to inject a larger quantity of the liquid than in the preceding case. I injected at first two ounces, and then one ounce more after having withdrawn that which had been first injected, and before the tunica vaginalis was entirely emptied. The young man scarcely complained during the operation and felt no pain in the lumbar region; wet compresses were applied to the scrotum, and the latter became the next day red, sensitive and swollen, but without exciting any fever until the fifth day. Then the tumour appeared to be distended by a new effusion, and had acquired the volume which it had before the operation. The eighth day the swelling had diminished one third. The patient had not left his bed until the sixth day. His alimentation had not been suspended. Examined the fifteenth day, the scrotum was still twice as large upon the left as upon the right side, but without the slightest appearance of liquid in the tunica vaginalis and the tumour presented no symptom of pain. M. Sylva went out the tenth day and is now perfectly cured. \* \* \* \*

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The tincture of iodine substituted for wine does not require to be heated, nor is any particular syringe, nor any previous preparation necessary. Since we are not obliged to distend the tunica vaginalis, we do not run the risk of causing the fluid to regurgitate or of forcing it into the thickness of the scrotum. As it is an absorbable substance, its infiltration does not, like wine, expose to gangrenous inflammations, it does not require to be retained

in the cyst more than five or ten minutes. I have left purposely an ounce in the tunica vaginalis, and the success was only more prompt. The developement of pain in the lumbar region is unnecessary. The patients suffer but little; they may walk without serious inconvenience, the day after the operation. M. de Ch., upon whom I operated in presence of MM. Parent and Nicholas, walked every day without retarding the cure. The cure is more prompt, and equally permanent, as by the wine. Will it be as constant? Nothing thus far has induced any doubt in this respect. Let us not forget, however, that these are only a few essays. It remains yet to be determined, what proportions of the tincture are most suitable, whether it is better to withdraw entirely the liquid, or leave a portion of it behind in the sac, whether it is indispensable that the patient should remain in bed, whether it is useful to make some topical applications to the tumour, and whether the results will be the same in the different kinds of hydrocele. Time alone can decide these points, but the success I have obtained, is sufficient to justify other attempts of the same kind, and to produce the supposition that the tincture of iodine will probably be substituted advantageously for the vinous injection in the treatment of hydrocele. One of the first patients treated by this plan, and who was cured the tenth day, died subsequently in consequence of an amputation of the leg. The scrotum was dissected with care; cellular adhesions had been established between all the points of the tunica vaginalis, so that a relapse would have been impossible. With this liquid, a syringe of the capacity of three or four ounces is sufficiently large for all cases; it should, however, be made of a substance which is not acted upon by iodine. Thus far I have employed ivory syringes.—*Archives Générales de Médecine.*

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*Account of a Method of Operating for Hydrocele.* By BENJAMIN TRAVERS, Esq.

This is essentially the same operation described in the preceding extract, but somewhat modified. The following is Mr. Travers's own account of his mode of proceeding, and the result of his experience of the practice.

"In the spring of 1836, I commenced the practice of the operation; first, making a single puncture with a trocar; secondly, with a fine sharp-pointed probe; thirdly, with an acupuncture needle of the largest size; and then planting several punctures at equal distances, according to the bulk of the hydrocele. A drop or two of fluid escaping at the several needle orifices, a rag dipped in cold lotion was laid on the part, and the general

result was more or less œdema of the scrotum, and in three days a total disappearance of the swelling. I soon ascertained that it was not by adhesive or any other mode of inflammation that the change was effected, but that the tunica vaginalis was left perfectly free and natural in its relation to the testis, and the scrotum of its proper weight, size, and figure, so that relapse was more to be apprehended. I was at first impressed with the idea that the tense condition of the tunic was essential to the curative effects of the puncture, and thus explained the difference of result from that obtained by complete evacuation and collapse of the sac. But this opinion I have had occasion to modify, finding that a freer discharge than could be obtained by the round needle, and the consequent partial collapse of the sac, was on the contrary more immediately and certainly productive of the infiltration of the cellular membrane, and consequent absorption of the fluid. I have, therefore, since employed a very fine trocar, smaller than any in common use, as the preferable instrument. My mode of proceeding is to put the scrotum on the stretch, in front of the testis, by embracing it with the extended thumb and fore-finger of the left hand; and placing the patient opposite a window on which the sun falls, or at all events a strong light, I command the view of the transparent bag so perfectly as to avoid veins and any point of accidental adhesion or thickening, which is always marked by a corresponding opacity. The punctures are made in a perpendicular direction and in quick succession, about equi-distant from each other, while the tunic is kept tense by graduated compression. Of several cases thus treated, some have remained cured; others, apparently cured, have relapsed after a fortnight or three weeks, and one after three months; but I do not consider this a fair criterion of the value of the practice, because from the shape and size of the acupuncture needles chiefly used in these cases, the points on which I believe the success of the operation mainly depends, were not accomplished. These are, a freer collapse of the sac by the removal of a sufficient portion of the fluid which the trochar puncture ensures, and the more complete diffusion of the remainder into the surrounding cremaster and cellular tunics, obtained by the multiplication of the punctures, while the tension of the sac is preserved. On the third day the fluid is absorbed, and the two sides of the scrotum are uniform: indeed, this is sometimes the case on the second day; but if the punctures are so small as not at once sensibly to reduce the bulk of the swelling, a single drop only exuding at each orifice, the reduction is generally much slower, or even fails altogether.—*Med. Gazette*, Feb. 11, 1837.



Mr. Travers imagined that he had anticipated Mr. Lewis in this mode of treating hydrocele; as he says he first conceived the idea of it in 1835, and mentioned it in his surgical course of lectures, previously to the publication of Mr. Lewis's first letter. In a subsequent communication in the *Lancet* of February 18th, Mr. Lewis informs us that he had performed the operation two years before the time mentioned by Mr. Travers. However, a letter in the *Medical Gazette* of the same date, from Mr. Keate, of Albemarle street, deprives both these gentlemen of the honor of having first employed this practice. The following extract from Mr. K.'s communication leaves no doubt on this head.

"While I do not mean to intimate any doubt of the same ideas having occurred to each of these gentlemen without any knowledge of the other's theory or practice, or of any previous operation of the kind, I trust it will not be offensive to either of them if I assure you that the plan and the practice have been known and acted on for very many years by myself, and I dare say by others. By one other person I know it was performed I dare say twenty years ago, namely, by a friend of mine, who for some years practised as a physician in this town, and is now living in retirement in the country. This gentleman performed the operation on *himself*, as he was nervous about the injection, and fancied, as he said, that if he could convert ascites into anasarca, absorption from the cellular structure might cure the malady; and in his own case it was perfectly successful. At his suggestion I tried it frequently, both at the hospital and in private practice; sometimes successfully, but more frequently the collection of fluid in the sac returned, and I generally found the patients impatient of the numerous punctures, and of the time required for the absorption. I remember talking to Sir Astley Cooper on the subject, and, as far as my recollection serves me, the plan appeared not to be new to him."—*Med. Gazette*, February 18, 1837, *Brit. and For. Review*.

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*On the Treatment of Hydrocele by Acupuncture.* By D.  
LEWIS.

In the *Lancet* of May 7th, 1836, Mr. Lewis communicated the interesting and important fact, that hydrocele might be cured by a single puncture with a fine needle. He says "a drop of fluid oozes out on withdrawing the needle, and in three days the swelling will completely disappear, no matter in what quantity the fluid may have been collected." It appears that the effect of the operation is not to evacuate the fluid through the puncture,

but to cause its absorption. He informs us that, out of upwards of fifty cases, there has not been a single instance of failure, nor any consecutive inflammation. It appears that this mode of treatment is applicable to other cases of circumscribed dropsy; and Mr. Lewis informs us, that Dr. Thomas Davies finds it successful in removing fluids from the chest. Mr. L. says that the needle used in this operation "cannot be too fine, provided it be strong enough to penetrate through the integuments; for, the smaller the puncture, the less pain and inflammation ensue."

*Lancet, January 14th, 1837.*

We noticed in the 1st. vol. Southern Medical and Surgical Journal, under the head of hydrocele of the neck, the use, by O'Beirne, of the single thread in effecting adhesion in cases of hydrocele of the neck, and we have no doubt but that its applicability to hydrocele of the tunica vaginalis would be followed by like success.

The following plan of operating for the radical cure of hydrocele, which was successfully adopted by Dr. DEBLOIS, is the only other improvement of latter days, which we shall give in this place; and it is one which we should not hesitate to recommend, had we found any fault with the plan of injection hitherto in general use. It may be conveniently practised with the same apparatus now in general use for the vinous injection; that is to say, a small trocar and canula, with an elastic gum bag and stop-cock, adapted to the canula. It would be more convenient, however, to use a bladder, or a very thin elastic gum bag, than those used for injecting a liquid, as they have sufficient elasticity to imbibe the liquid into their cavity after being compressed.

*Chlorine Gas as an Injection for the Cure of Hydrocele. By*  
M. DECONDÉ.

Dr. Deblois, of Tournay, was in the habit of performing the radical cure of hydrocele by injecting chlorine gas, instead of red wine. His premature death prevented him from making known the plan; but M. Decondé, who has seen its advantages, has described it. The chlorine gas is contained in a bladder, to which is fixed a pipe and stop-cock, adapted to the canula of the trocar, into which it is fixed after the fluid has been evacuated: the stop cock is then turned, and the bladder pressed so as to force the gas into the tunica vaginalis. When this is distended, the pipe and bladder are removed, and the thumb placed over

the mouth of the canula, so as to prevent the escape of the gas for the space of two minutes; it is then allowed to escape, and two or three repetitions of the injection are made, which is sufficient for the cure. The advantages are—the simplicity of the apparatus; and the whole sac, being equally distended and exposed to the contact of the gas, which is not the case with fluid injections, which always gravitate. The danger also which sometimes occurs from the fluid being forced into the cellular tissue of the scrotum is avoided. M. Decondé proposes that the same remedy should be used in the cure of other diseases, characterized by the secretion in various cysts.—*Bull. Méd. Belg. Brit. and For. Med. Review.*

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### *Tartar Emetic and Opium in the delirium of Typhus.*

Every practitioner of experience has observed the composing efficacy of opium in small quantities in certain fevers, as used in combination with diaphoretics, such as, saline mixtures and sudorific draughts of different kinds with antimonials; as well as the more stimulating sudorifics as camphor, seneka, different sudorific ptisans, &c. The Dublin physicians, some of whom may now be ranked with the foremost practitioners of the present age, are making valuable additions to therapeutics in many respects, and particularly in extending the valuable and safe use of antimonials and opiates. In the 1st vol. of this journal we noticed the use of tartar emetic by Dr. KENNEDY, in some of the most important cases in obstetric practice, to which, from the great value of the experience of Dr. K. with this article, we beg leave to direct the attention of the reader. On the present occasion we give from the American Journal, the experience of Drs. HUDSON and GRAVES in the use of tartar emetic and opium in the delirium of typhus,—cases in which every practitioner has but too often felt the want of remedial means which were not at his command.

Dr. HUDSON, in an interesting article in the Dublin Journal for July last, on the use of certain remedies in typhus fever and its combinations, states that he has tried Dr. GRAVES' mode of giving opium, viz: in combination with tartar emetic, for the relief of the delirium of typhus, in six cases. In one, a case of furious delirium, this treatment, as well as every other, failed:



in the others, and in numerous cases since the period comprised in this report, he says that it has succeeded admirably. It seems, he adds, best adapted to that restless kind of delirium resembling delirium tremens, in which the patient cannot be restrained from attempting to leave his bed and walk about the ward ; when every muscle is tremulous, the eyes red from want of sleep, the tongue dry, and the patient presenting that kind of spurious excitement which might induce the attendant (injudiciously, no doubt,) to order the local abstraction of blood, by leeching the temples, or opening the temporal artery. In prescribing this medicine, Dr. HUDSON thinks it is advisable to use caution in two ways:—1st. Not to give it *after* it has produced sleep. 2d. To follow it up by the prompt and frequent exhibition of wine, and such nourishments or cordials, as the more or less advanced stage of the disease, and debility of the patient may require ; as it seems to him that there is increased risk of the patient's sinking, unless timely supported after sleep thus induced.

The following are some of the successes of Dr. GRAVES alluded to by Dr. HUDSON, in cases of a similar pathological condition. So valuable in a practical point of view on the observations of Dr. GRAVES in his chemical lecture in the Meathe Hospital at Dublin, on some points connected with the treatment of fever, and especially with regard to tartar emetic and opium, that we shall extract his observations on tartar emetic, and their application to the treatment of a few cases, before giving those in which the combination of these two capital medicines, were so signally useful. We refer to the American Journal, for extracts from the London Medical and Surgical Journal for 1835.

“I come now gentlemen,” said Dr. GRAVES, “to speak of a matter of great importance in the treatment of fever.—I allude to the indications for exhibiting, and the mode of giving tartar emetic at different periods of the continued fever of this country. For some time I have been in the habit of employing tartar emetic with very remarkable success at various periods of fever, but principally towards its termination. I am therefore anxious to lay before you a brief statement of my experience of this admirable remedy, and I shall take leave to illustrate this by a reference to several very remarkable cases in which its administration was followed by the most decided and satisfactory results.

You are well aware that tartar emetic has been long and justly valued by the profession for its manifold and energetic prop-

erties. Without referring to its importance in the treatment of pulmonary diseases, and almost every form of local inflammation, I may observe, with respect to our present subject, that tartar emetic in small portions, dissolved in a quantity of whey or water, has been for a considerable time a popular and successful remedy in the commencement of febrile symptoms. Whether it is by its action on the stomach and intestinal canal, or by producing diaphoresis, or by some peculiar influence on the nervous and circulating systems, that it produces its favourable effects, we cannot exactly say; but we know that it frequently succeeds in cutting short or removing febrile symptoms. All these matters are, however, sufficiently well known to every student and require no comment.

In a preceding lecture, when speaking of the best means of procuring sleep in various forms of acute disease, I alluded to the peculiar narcotic power of the preparations of antimony, and dwelt on the benefits derived from a combination of antimonials with those medicines which are strictly termed narcotics. I told you in that lecture, that the good effects of tartar emetic in delirium tremens seem to be totally independent of its action on the stomach; for we had witnessed those effects when it had not excited either nausea or vomiting. I referred also to many instances of delirium tremens, in which opium in every form had failed in procuring sleep, and where a combination of tartar emetic and laudanum had succeeded in tranquillizing the patient, and producing sound, refreshing sleep. Bearing this important fact in mind, we shall proceed to an examination of the circumstances which require the tartar emetic in fever.

There is a particular stage in one form of fever, and that exceedingly dangerous and threatening, in which I have derived most signal benefit from the use of this remedy. A patient, suppose, gets an attack of fever, he has all the ordinary symptoms, as thirst, restlessness, heat of skin, quick pulse, and head-ache. You are called in about the 3d or 4th day, and find that he has all the symptoms I have mentioned still present; his face is flushed, his head aching, his pulse from 100 to 110, but not remarkably strong; you find also that he has been sweating profusely from the commencement of his illness, but without any proportionate relief to his symptoms, and that he is restless and watchful. You are informed that his perspirations are so great that his linen has to be changed frequently in the day, and that, notwithstanding this, the pulse has not come down, the head-ache is undiminished, and the patient has become more and more sleepless. Here comes a very important practical question, namely,—How are you to treat such a case? The patient has no epigastric tenderness, no cough, no sign of local disease in either the thoracic or abdominal cavities; he has been purged, used diaphoretics, and perhaps mercurials; every attention has been paid to regimen,

ventilation, and cleanliness ; but still he lies there in a state of undiminished febrile excitement, with persistent head-ache, quickness of pulse, and sleeplessness.

In such a case as this you have nothing to expect from the sweating ; it will never produce any relief. I was called some time back to see a young gentleman in fever, who was placed in similar circumstances to those which I have just detailed. It was about the sixth day of his fever, and I found him with a pulse of about 110, with considerable restlessness and head-ache, and was informed that he had perspired profusely from the commencement of his illness. On hinting the necessity of more active treatment than that which had been employed, his physicians appealed to the perspirations as decidedly contra-indicating depletion. They said that the profuse sweating pointed out the impropriety of active measures, and that it was a symptom which would be speedily followed by relief. I was convinced that they had taken a wrong view of the case, and stated as my opinion that nothing was to be expected from the perspiration ; that when co-existing with a persistent febrile condition of the system, when accompanied by quick pulse, head-ache, perspirations always indicated the necessity for antiphlogistic measures, and in particular for the use of the lancet. I instanced the case of patients labouring under arthritis with profuse perspirations not accompanied by relief, and said that it was well known that such cases were most successfully treated by a full bleeding from the arm. I accordingly stated, that although the disease was of five or six day's standing, and the pulse not very strong I would advise immediate bleeding. Sixteen ounces of blood were therefore abstracted, with some relief to the patient, and without increasing his debility ; and it was then a question what further steps were to be taken. The young gentleman had been actively purged ; he had no cough or abdominal tenderness ; his symptoms were head-ache, sweating, and sleeplessness ; and to these, nervous agitation had now become superadded. I proposed here what surprised my colleagues very much, and this was, to give our patient large doses of tartar emetic. They said the practice was very strange, but consented to give it a trial, on laying before them the reasons which induced me to prescribe it. I said, that in such cases the tartar emetic forming as it were a part of the antiphlogistic treatment, which commenced with general bleeding, would have a tendency to cut short instead of increasing the perspiration, by reducing the inflammatory state of the system on which it depended. The reasoning seemed rather paradoxical,—nevertheless it turned out to be correct. I ordered the tartar emetic to be taken in the quantity and mode in which it is generally prescribed in acute pneumonia : that is to say, six grains of tartar emetic combined with a little mucilage and cin-



namon-water in an eight ounce mixture, to be taken in the course of twenty-four hours. After taking five or six grains, the sweating began to diminish; on the second day he scarcely perspired any, and his head-ache was greatly relieved; he began to improve rapidly in every respect, sleep returned, nervous agitation ceased, and convalescence became soon established.

The next case in which I employed tartar emetic with signal benefit, was one of a very insidious character, as many of them are at present; they exhibit no prominent or alarming symptoms, and yet continue to run on day after day without any tendency to crisis. The gentleman who was the subject of this case got an attack of fever unaccompanied by any remarkable peculiarity, except that he was very nervous, and alarmed about his situation. His fever went on, day after day, without any decided symptom; he had no distressing head-ache, no cough, little or no abdominal tenderness; there was no vomiting or diarrhœa; and his pulse was not much above the natural standard. He had been leeches over the stomach at the suggestion of some medical friends, but this was done rather by the way of precaution than for the purpose of combatting any actual disease. About the eighth or ninth day the pulse began to rise; he complained of head-ache, and became restless and watchful. On the eleventh day the head-ache had greatly increased, he was in a state of great nervous excitement, and had not closed an eye for the two preceding days and nights. This state of insomnia and nervous agitation was immediately followed by violent paroxysms of delirium; his eyes, never closed in sleep, wandered from object to object with unmeaning restlessness; his limbs were in a state of constant jactitation, and he raved incessantly; his voice being occasionally loud and menacing, at other times low and muttering. His friends became exceedingly alarmed, and every remedy which art could suggest was tried—his head was shaved, and leeches until they could leech no longer; cold lotions were kept constantly applied with unremitting diligence, and he was purged freely and repeatedly. At this period, that is to say, about the eleventh day of the fever, I was requested by this gentleman's medical friends to visit him. On examining the patient, I found that he was constantly making violent efforts to rise from his bed, and that he had a great deal of the expression of countenance which belongs to a maniacal patient. Under these circumstances, I advised the use of large doses of tartar emetic, in the mode already detailed, except that, in this case, in consequence of the violence of the delirium, I ordered the quantity prescribed for a dose to be taken every hour. The patient took about ten or twelve grains during the course of the night, and next day his delirium had almost completely subsided. Under the use of the remedy he became quite calm, fell into a sound sleep, and began to recover rapidly.

In the two preceding cases, gentlemen, I was guided by ordinary principles, recognised by all physicians, and according to which the exhibition of tartar emetic is recommended in fever whenever there is undoubted evidence of determination of blood to the head, producing head-ache, loss of sleep, and delirium. In the cases which follow, tartar emetic was exhibited at a period of fever, and under circumstances that were, with respect to the exhibition of this remedy, not less novel than important. The principles which led me to this practice have been long established, but, nevertheless, the practice is entirely new, and (I say it with pride, for it has already been the means of saving many valuable lives,) it is entirely mine.

Shortly after the commencement of our present session, Mr. Cookson, a pupil at this hospital, and remarkable for his diligent attention to clinical pursuits, caught fever while attending our wards, in which many cases of the present epidemic were then under treatment. His fever was of an insidious nature, not characterized by any prominent symptom, not exhibiting any local disease to combat, or any tendency to crisis. For the first seven or eight days, with the exception of head-ache, which was much relieved by leeching, he seemed to be going on very well; his skin was not remarkably hot; he had no great thirst, nausea, or abdominal tenderness; his pulse was only eighty-five; and he had sweating, which was followed by some relief. About the eighth or ninth day, the pulse rose, and he began to exhibit symptoms of an hysteric character. Now, in every case of fever, where symptoms resembling those of hysteria come on, you should be apprehensive of danger. I do not recollect having ever met with a single case of this kind which did not terminate in nervous symptoms of the most formidable nature. I prescribed at the time the usual antihysteric medicines, but without any hope of doing good, knowing that these symptoms were only precursory to something worse. I also, as a precautionary measure, had leeches applied to his head. The fever went on, the head-ache became more intense, he grew nervous and sleepless, and fell into a state of great debility. On the fourteenth day of fever, his tongue was black and parched, his belly tympanitic; he was passing every thing under him unconsciously; he had been raving for the last four days, constantly attempting to get out of bed, and had not slept a single hour for five days and nights. Dr. Stokes, with his usual kindness, gave me the benefit of his advice and assistance at this stage of Mr. Cookson's illness, and we tried every remedy which experience could suggest. Blisters were applied to the nape of the neck, the head was kept cool by refrigerant lotions, the state of the belly attended to, and, as we perceived that the absence of sleep was a most prominent and distressing symptom, we were induced to

venture on the cautious use of opium. It was first given in the form of hydrarg. c. cretâ, with Dover's powder, with the view of relieving the abdominal symptoms as well as procuring sleep. This failing in producing the desired effect, we gave opium in the form of enema, knowing its great power in the delirium which follows wounds and other injuries. This was equally unsuccessful with the former. He still was perfectly sleepless. We came again in the evening, and, as a last resource, prescribed a full dose of black drop, and left him with the conviction, that if this failed he had no chance of life. On visiting him next morning at an early hour, we were highly mortified to find that our prescription had been completely unsuccessful; he had been more restless and delirious than ever. Here was the state in which we found him on entering his chamber at eight o'clock in the morning on the fifteenth day of his fever. He had universal tremors and subsultus tendinum, his eyes was suffused and restless, he had been lying for some days entirely on his back, his tongue was dry and black, his belly tympanitic, his pulse 140, quick and thready, his delirium was chiefly exhibited in short broken sentences and in a subdued tone of voice, and it was now eight days and nights since he had slept. Here arose a question of great practical importance. How the nervous agitation was to be calmed and sleep produced? Blisters to the nape of the neck, cold applications, and purgatives had failed; opium in various forms had been tried without the slightest benefit; if sleep were not speedily obtained he was lost. At this emergency a mode of giving opium occurred to me which I had never thought of before. Recollect what his symptoms were at this period: quick failing pulse, black, dry, tremulous tongue, great tympanities, excessive prostration of strength, subsultus tendinum, extreme nervous agitation, constant muttering, low delirium and total sleeplessness. I said to Dr. Stokes that I wished to try what effects might result from a combination of tartar emetic and opium; I mentioned that I had given it in cases of delirium tremens with remarkable success, and thought it worthy of trial under the circumstances then present. Dr. Stokes stated in reply, that he knew nothing with respect to such a combination, as adapted to the case in question, that he had no experience to guide him, but that he would yield to my suggestion. We therefore prescribed a combination of tartar emetic and laudanum in the following form, which is that in which I generally employ these remedies in the treatment of delirium tremens. *R. Antimonii tartarizati grana quatuor, tinct. opii. drachmam, misturæ camphoræ, ʒviiij.* Of this mixture, a table-spoonful to be taken every second hour. The success of this was almost magical. It is true that it vomited him; after taking the second dose he threw up a large quantity of bile, but it did him no harm. After



the third or fourth dose he fell asleep, and awoke calm and refreshed; he began to improve rapidly, and soon recovered.

The next case to which I shall direct your attention is that of Mr. Stephenson, a pupil of Mr. Parr of this hospital. This young gentleman, as many of you will recollect, was attacked with fever about the middle of January. On Thursday evening he complained of languor and malaise, and on the following day felt himself feverish, but without any prominent or decided symptom. At night he took a dose of calomel and antimonial powder, which had no sensible effect, and the following day complained of shivering, violent head-ache, pain in the back, thirst, prostration of strength, and sleeplessness. He was ordered to take a combination of tartar emetic and nitrate of potash in camphor mixture, which produced a few loose stools and some diaphoresis; but in consequence of its effect on the stomach, and his complaining much of thirst and epigastric tenderness, the tartar emetic was omitted and effervescing draughts prescribed. Two days afterwards, the epigastric tenderness still continuing, twelve leeches were applied over the pit of the stomach, followed by a blister, which gave relief, and the bowels were kept open by enemata. He commenced a second time the use of the tartar emetic and nitrate of potash, with the addition of five drops of tincture of opium to each dose, but was obliged to give it up again in consequence of the increase in his gastric symptoms. He now became exceedingly restless, and his delirium began to assume a very intense character. Leeches were applied behind the ears, his head shaved and his temples blistered; he had also a large blister over the abdomen, which gave him considerable relief, but the cerebral and nervous symptoms became much worse. The delirium went on increasing, accompanied by subsultus tendinum, and picking the bed-clothes; he was perfectly sleepless, raved incessantly, and had to be kept down by force. On the seventeenth day of his fever he was in the following condition,—tongue brown and rather dry, no remarkable thirst or abdominal tenderness, eyes red and ferrety, no sleep for five nights, constant muttering and delirium (which had now assumed the character of delirium tremens), subsultus tendinum and jactitation extreme, urine and fæces passed under him unconsciously. I directed the combination of tartar emetic and laudanum to be immediately given, carefully watching its effects. He had only taken two doses when a degree of calmness set in, bringing with it relief to all his symptoms, and before a third dose could be administered, he fell into a profound sleep, from which he awoke rational and refreshed. The mixture was continued every four hours with increasing benefit, he slept long and soundly, and began to improve in every respect. On the second day after he had begun to use the tartar emetic, he took

a little porter, which was changed the next day for claret and chicken broth. In about a week he was able to sit up in bed, and seven days afterwards he was able to leave the hospital and go to the country for change of air.

The last case to which I shall direct your attention is that of Mr. Knott, also a pupil of this hospital, a gentleman remarkable for his unremitting attention to clinical pursuits, and from whom I derived much valuable assistance in conducting various post-mortem examinations. This gentleman was attacked with fever about the latter part of January, which went on for some time without any particular symptom, except considerable restlessness and nervous excitement. He then became perfectly sleepless, complained of violent head-ache and thirst, raved, and became exceedingly irritable. Opium in various forms and repeated doses, either alone, or combined with musk or camphor, totally failed in producing sleep, and his condition became daily worse. On the thirteenth day he was in a very dangerous condition; his nervous agitation had risen to an alarming height, and for many days and nights he had never closed an eye. At this period it appeared obvious that if something were not done to calm nervous excitement and restore sleep, he had but little chance of life. Under these circumstances I proposed to my friend, Dr. McAdam, who attended with me, to give tartar emetic and opium. After he had taken about three table-spoonsful, he had a copious bilious evacuation, and immediately afterwards fell into a sound sleep, during which he perspired profusely, and awoke in about twelve hours, with every bad symptom gone. The nervous irritability was completely allayed; his thirst and head-ache relieved; his tongue moist and cleansing; and his reason quite restored. From that period every thing went on favorably, and he rapidly regained his health and strength.

Since the foregoing lecture was delivered, I have met with several cases of fever in which I employed the tartar emetic and opium, with the same remarkable success. A man named Christopher Nowlan was admitted into Sir P. Dunn's Hospital, on the 3d February last, labouring under fever. He had been ill ten days, had raving, subsultus tendinum, and appeared unable or unwilling to answer questions. His wife stated that he had diarrhœa for the preceding three days, and that he dozed occasionally, but never slept. He appeared exceedingly low and prostrated, and lay constantly on his back. A succession of flying blisters were ordered to be applied to the chest and stomach, and wine and chicken broth prescribed. He also got the following draught every third hour:—*a. Mist. camphoræ, ʒj.; Spirit. ætheris oleosi, ʒss.; Spirit. ammoniæ aromaticæ, ʒss.; Moschi, gr. viij. Misc.* Under the use of these remedies he began to recover from his prostration, but as the sleeplessness and delirium

still continued, I ordered him to take the tartar emetic mixture in the usual way. It produced at first two or three full discharges from the bowels, and after he had taken the fourth dose he fell into a sound sleep, from which he awoke much better, and soon became convalescent.

In the case of a patient named Michael Murray, who exhibited the same remarkable nervous irritability and sleeplessness, this remedy was also employed with very striking effects. This man had been ill of fever for ten days before his admission into Sir Patrick Dunn's Hospital, and appeared so much prostrated, that I ordered him arrow-root, with beer. He raved a little on the night of his admission, and remained without closing an eye until morning. The same symptoms were observed on the following day, and his nervous irritability became increased. On the 14th of February he had been five days in the hospital, and had not enjoyed a single hour's sleep. I ordered the tartar emetic mixture to be given: three doses produced sleep: he had no other bad symptoms, and recovered completely.

In another very bad case of maculated fever, the same results were obtained. The patient, Mary Farmin, had got an attack of fever after a fright. She had been eight days ill, at the date of her admission, February 25th. She had irregular pulse, sleeplessness, head-ache, and suffusion of the eyes; moaned and sighed continually, and appeared greatly prostrated. She was blistered, had foetid enemata and took the chloride of soda internally with some benefit; but the sleeplessness and nervous excitement continued. In this case, though the tartar emetic was not followed by speedy convalescence, still it produced remarkably good effects; after taking four doses of it, she fell asleep, and did not awake until next morning.

There are many other cases which I could adduce to prove the value of a combination of tartar emetic and opium in the nervous sleeplessness of low fever; the foregoing I trust will be found sufficient.

I forgot to observe, that all the cases I have spoken of as successfully treated by means of tartar emetic combined with opium, in the advanced stage of the disease, were cases of maculated or spotted fever. I shall take a future opportunity of entering more fully into a detail of its symptoms.—*Lond. Med. & Surg. Journ., May 1835.*



*Compression of Arteries.*

In the last February No. of this journal we gave, from the *Journal des Connaissances Medico-Chirurgicales*, the observations of M. TROUSSEAU on the compression of the carotid artery in the treatment of certain convulsions. In the first part of the present number we insert a letter on the same subject, from Professor DUGAS, in which it will be found that the remedial mean advanced by M. TROUSSEAU is ably and critically examined in relation to the anatomy of the part, &c. ; and its useful practicability doubted. We hope however, that as it is a plan susceptible of immediate application, and not calculated to interfere materially with any other plans of treatment which may be thought necessary, that its use will be adopted as opportunities may offer, and its effects accurately observed and reported to us, whether favorable to one opinion or the other: for it is sometimes the case, in the practice of medicine—indeed often the case, that practical results are extremely different from the suggestions of the best *a priori* reasoning from the known facts of anatomy and physiology.

The remedy of compression of arteries is far from being new in the hands of M. TROUSSEAU, as will be seen by the following letter of M. DEZEIMERIS to the Royal Academy, which we extract from the *Archives Gen. de Med.*

M. Dezeimeris writes to the Academy for the purpose of protesting against the pretensions of several physicians to the discovery of this mean employed as a therapeutic agent, and to which he has for several years directed the attention of practitioners.

“It is neither these gentlemen, nor I,” says he, “who have invented the compression of the carotial arteries, for before us, Preston tied these vessels in cases of epilepsy reputed incurable. Before Preston, M. Bland compressed the carotid in cerebral fever; before Bland, Autheurieth employed the same plan in convulsions; before Autheurieth, Liston had recourse to the same plan in a case of neuralgia; before Liston, Earle employed the method advantageously in epilepsy; before Earle, Livingston and Kellie used arterial compression in rheumatism; before the two last physicians, Ludlow employed it in gout, and before all, Parry, of Bath, the true inventor of the compression of the arteries, and particularly of the carotids, had not only perceived the utility of the plan in all the cases mentioned above, but also in many others.

*Aneurism of the Iliac Artery cured by the application of Ice.*  
By Drs. REYNAULD, (of Toulon,) and LABISSAL.

The patient, a seaman, aged 34, had presented for six months a very large tumour in the inguinal region, the circumference of its base was 22 inches; it was divided into two parts by Poupart's ligament, and seemed to extend nearly to the umbilicus, under the form of a hard and voluminous cord. The pulsations were obscure, the summit presented fluctuations and appeared to be upon the point of breaking. The extremity of the same side was enormously tumefied. The tumour then occupied the crural and the internal and external iliac arteries and extended so low down that it was impossible to employ the method of Brasdor.

*February 16th, 1834.* The patient was subjected to the application of ice contained in a bladder which was kept constantly upon the tumour; the regimen consisted of panado, rice, sweatened with honey and acidulated with sulphuric alcohol and subsequently acidulated barley. In the month of November, 1834, we were desirous of substituting compression for the ice, but the pain experienced by the patient compelled us to renounce this plan. In January, 1835, the extremity had returned to its normal state, it was not however until a year after, that the pulsations re-appeared in the inferior third of the crural and in the tibial and pedal arteries, and that the patient was enabled to walk. Before the cure of the aneurism two years elapsed, during which time, except the few days when the compression was attempted, the application of the ice had been continued during the two last months, the ice had been placed in a tin box, slightly concave at its inferior face and which exerted a slight compression upon the tumour—*Arch. Gen. de Med.*

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*Structure of Muscular Fibres.*

*On the Elementary Structure of Muscular Fibre of Animal and Organic Life.*—Frederick Skey, Esq. has presented to the Royal Society an interesting memoir on this subject.

The author concludes, from his microscopic examinations of the structure of muscular fibres, that those subservient to the functions of animal life have, in man, an average diameter of one 400dth of an inch, and are surrounded by transverse circular striæ varying in thickness, and in the number contained in a given space. He describes these striæ as constituted by actual elevations on the surface of the fibre, with intermediate depres-

sions, considerably narrower than the diameter of a globule of the blood. Each of these muscular fibres, of which the diameter is one 400th of an inch, is divisible into bands or fibrillæ, each of which is again subdivisible into about one hundred tubular filaments, arranged parallel to one another, in a longitudinal direction, around the axis of the tubular fibre which they compose, and which contains in its centre a soluble gluten. The partial separation of the fibrillæ gives rise to the appearance of broken or interrupted circular striæ, which are occasionally seen. The diameter of each filament is one 16,000th of an inch, or about a third part of a globule of the blood. On the other hand, the muscles of organic life are composed, not of fibres similar to those above described, but of filaments only; these filaments being interwoven with each other in irregularly disposed lines of various thickness; having for the most part a longitudinal direction, but forming a kind of untraceable net-work. They are readily distinguishable from tendinous fibres, by the filaments of the latter being uniform in their size, and pursuing individually one unvarying course, in lines parallel to each other. The fibres of the heart appear to possess a somewhat compound character of animal life; while those of the œsophagus, the stomach, the intestines, and the arterial system, possess that of inorganic life. The determination of the exact nature of the muscular fibres of the iris presented considerable difficulties, which the author has not yet been able satisfactorily to overcome.—*Transactions of the Royal Society, for 1836.*

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### *Electrical Phenomena of the Blood.*

*On the Causes of the Motion of the Blood in the Capillary Vessels.* By Dr. POISEUILLE.—When the globules of the blood in the capillaries of the mammiferæ are examined, they are found to possess different velocities, even in the same vessel. Some of them have two simultaneous motions—one of rotation, the other of translations; while others remain motionless for a time. Two globules, presenting at first the same velocity, only preserve by accident the distance which separates them, and, if the motion be such as to permit us to follow the same globule, we can observe it sometimes in the same capillary vessel presenting these different phases of motion. The velocity of the globules in the capillaries is less than in the arteries and veins; it is seldom greater. This remark extends also to capillary vessels which rise immediately from an artery, or which proceed directly into a venous trunk. These different phenomena lead to the conclusion that the globules are endued with a spontaneous motion, or, rather,



that the cause of the flow of blood through the capillaries is different from the cause which regulates the motion of the blood in the large vessels.

Dr. Poiseuille has endeavoured to examine with great attention the causes of the motion of the blood in those parts of vessels which have been isolated from the action of the heart by means of ligatures, or separated from the body by cutting instruments, and then to study the influence of the heart and arteries upon the capillary circulation.

He has established, by a great number of experiments, that the calibre which the arteries and veins present, proceeds from the pressure of the liquid which they contain; that their coats are constantly distended by the blood which they receive; that these vessels tend to collapse suddenly, in consequence of the elasticity of their coats, as soon as the cause of their dilatation is removed.

The large arteries and veins, as well as the small ones, possess this property; but, besides, the diameter of the last gradually diminishes when they cease to receive blood. This retraction is sometimes so great, that the mesenteric vessels of the frog, salamander, young rats and mice, are reduced to two-thirds of their original diameter. He has also ascertained that, *cæteris paribus*, this reaction is more decided in the arteries than in the veins. These facts being known, it is easy to determine the motions of the blood in parts which have been separated from the trunk either by ligature or by a cutting instrument—motions which even yet are designated by the title of circulation.

In fact, an attentive examination of this pretended circulation shows us, that the part being in a horizontal plane, the motion of the globules in the capillaries is totally at an end; that all the vessels, arteries and veins, carry the blood from the extremities to the amputated surface; that this motion, becoming more and more slow, ceases after the expiration of some time, and at the same time the organ presents a much smaller quantity of blood. These motions result, then, simply from the approximation of the coats of the vessels towards their axis; they necessarily, therefore, drive the blood towards their open extremities. The tail of the frog, the foot of the same animal, the mesentery of very young rats, of young mice, separated from the trunk by a cutting instrument, have presented constantly the same phenomena. This pressure which he has established with regard to the blood of animals, exists also in the liquids of vegetables; he also believes that this kind of circulation, which may be observed in the stipula of the *Ficus elastica*, detached from the trunk, is due to the same cause.

The action of gravity, as well as that of heat, are also causes, but confined within more narrow limits of the motion of the globules in parts separated from the trunk, especially when the blood has not yet coagulated in the vessels.

Numerous experiments made, 1st, upon the heads of the salamander and frog, animals in which the circulation is, as it were, suspended at pleasure, show that it is established gradually from the centre to the circumference; 2nd, upon the foot of the frog, dividing the crural vessels; 3d, upon the mesentery of the frog and salamander, by cutting the heart; 4th, upon the mesentery of young rats and mice. All these experiments, of which several are confirmed by those of the two celebrated physiologists, Haller and Spallanzani, have convinced Dr. Poiseuille that the heart and elasticity of the arterial coats are the *sole agents* in the capillary circulation in question.

In resting upon the preceding facts, that is to say, the action of the heart and arteries, and the tendency which the latter have to collapse when they are not sufficiently dilated by the tide of blood projected from the heart, the constant *jerking*, *intermittent*, and *oscillatory* circulation, which precede the death of an animal, are easily explained; the cause of the *retrograde circulation* presented by the arteries after the death of the animal and that of the heart is similar.

Having cleared up these points, the author passes on to the examination of the causes of the irregular motions of the globules which he has observed in the capillary vessels.

If we study the course of the blood in the arteries and veins of the frog, of very young rats and of young mice, we observe, in proceeding from the axis of the vessel to the coats, that the velocity of the globules is totally different. In the centre, their velocity is at a maximum; it diminishes gradually as we approach the coats. In the immediate neighborhood of the coats, a very transparent space can be observed, which is generally occupied by serum; this space is equal to about the 1-8th or 1-10th of the diameter of the vessel. This transparent part of the vessels observed by Haller and Spallanzani as being occupied by serum, has been again noted by Blainville.

Since some of the globules, rubbing against each other, are projected into this transparent part of the vessels, the globules placed in the middle possess a very slow motion, and they cease to move when they are almost in contact with the coats of the vessel. The globules which are nearest to this transparent part have a double motion of rotation and translation; they roll, if the expression may be used, over this part of the serum.

From these observations, the author concludes that the interior of the vessels is lined with a layer of serum at rest. Since this layer is immovable in its immediate contact with the coats of the vessels, every time that a globule is placed there it will be at rest, or rather, its velocity will be more or less diminished, according to the portion of the globule immersed in it. Now, in the capillaries the globules move between two layers of serum.

Hence, their motion ought to be less rapid than in the large vessels, since they require to overcome the inertia of this layer.

If a globule is partly in the layer, this portion of the globule will be at rest, while its remainder, placed in the axis of the vessel, will acquire a certain velocity; then the globule will move round its own axis, in order to acquire its normal velocity in following the centre of the vessel. If of two globules, one is placed in advance of the other in the layer, the former will pursue its course, and the latter will be delayed, and the motions described will be presented.

The labours of M. Girard upon the flow of liquids in tubes of small diameter have established, in most tubes susceptible of being softened by the liquid moving of them, the existence of a similar layer. The author passed through tubes of very small diameter, liquids holding in suspension opaque bodies; and, having examined this current by a microscope, he found this layer immovable, and of a thickness much smaller than that obtained by the calculations of Girard.

Hence, the author concludes, that the blood transported by the vessels of the heart to all parts of the body does not impinge against the coats; that a layer of serum, by its state of rest, guards the coats from any such effects. Besides, we can conceive the importance of this immovable layer of serum lining the coats of the vessels in the act of nutrition, since the recent experiments of Müller of Berlin have demonstrated, that the fibrin is held in solution by the serum.

Dr. Poiseuille has further studied the influence of cold and heat upon this layer of serum. The following experiment shows the result. At the temperature of  $77^{\circ}$ , he examined the circulation in the foot of a frog, and, in the vessel where the foot was placed, he deposited pieces of ice. In the large vessels, the transparent part of the serum obviously increased in thickness; the globules in immediate contact with it moved more slowly; the three orders of vessels, arteries, capillaries, and veins, preserved their diameters sensibly; the velocity in the capillaries was considerably diminished, and in some of these vessels it became insensible; during six or eight minutes, for example, the circulation in the capillaries of the other foot of the frog preserved its normal velocity: and it was not till a quarter of an hour after the submersion of the first foot in the iced water that the velocity of the blood in the second foot, placed in the atmosphere, was diminished, in consequence of the temperature of the whole mass of blood being sunk. The ice in the vessel was replaced by water at the temperature  $100^{\circ}$ , and the velocity of the globules became then so great, that their form could scarcely be diminished. In young rats, the cold, applied only for a few minutes, stopped the circulation in the capillaries of the mesen-



tery. It gradually resumed its powers, and acquired its normal rhythm after the ice was withdrawn.

Thus the diminished velocity of the capillary circulation by cold, and greater rapidity by the action of heat, are naturally interpreted by the increase in the thickness of this layer in the first place, and its diminution in the second.

These results completely correspond with those of M. Girard on the variation in the thickness of the layer which lines the coats of inert tubes, when the temperature increase or diminishes.

We know that certain animals, such as fishes, and some amphibious mammalia, are sometimes immersed nearly 262 1-2 feet (80 metres) beneath the surface of the water, and then support a pressure of from seven to eight atmospheres. It is important, therefore, to know how this layer acts, and at the same time to observe the modifications of the capillary circulation under such pressure. With this object in view, the author has constructed an apparatus, to which he has given the name of *Porte-object pneumatique*. A short description will afford an idea of it, and develop the results which may be derived from its use. It consists of a strong box of copper; the top and bottom are formed of crystal, fitted into grooves placed in the sides. One of the extremities of this box carries a copper tube, which contains sometimes a barometer tube, and sometimes a manometer for compressed air; the other extremity presents a large opening by which the animals are introduced. To this extremity sometimes a suction pump is adapted, and sometimes a forcing pump. The animal, prepared in such a way as to allow the capillary circulation to be seen, is placed in the instrument, and the apparatus placed under the microscope. We can then observe the modifications which may introduce in the capillary circulation a more or less considerable pressure. In salamanders, frogs, tadpoles, young rats and mice, the arterial, venous, and capillary circulation have not presented any remarkable change, even when raising the pressure rapidly to 2, 3, 4, 6, and 8 atmospheres, and reciprocally. Farther, the circulation has continued to preserve the same rhythm even under a pressure of some centimètres (39 inches) in salamanders, frogs, and tadpoles. On placing in the apparatus very young rats and mice (it is well known that the mammalia, during the first days of their birth, may remain some hours without breathing) the circulation can be seen perfectly, *in vacuo*. How absurd, then, is the opinion of these philosophers who consider that, without atmospheric pressure, circulation cannot go on; but atmospheric pressure combined with the motions of respiration, are accessory causes of the flow of the blood, as Dr. Poiseuille has shown in another memoir.

From these experiments, he infers, that the thickness of layer

of serum, the existence of which is due to the affinity subsisting between the coats of the vessels and the serum, a thickness which varies so remarkably from heat and cold, is independent of surrounding pressure, that the contractions of the heart preserve their normal rhythm, whatever the pressure is.

Several tubes of *chara*, placed in this apparatus, had presented under a pressure, varying from 209 (7-8 inches) to 600 centimètres (23-6 inches) the same modes of circulation; and the motions of some infusorii contained in the water of the *chara*, such as *vorticelli*, *potifera*, &c., were executed with the same facility as under the influence of the atmosphere.—*Records of General Science* from *Bib. Univ. for November, 1835*.

We perceive in the above extract, that Dr. POISEVILLE has observed that the globules of the blood, in the capillaries of the mammiferæ, possess different velocities, even in the same vessel; and that some of them have two simultaneous motions; that is to say, one of rotation, and the other of translation. That other globules remain motionless for a time; and that two globules, presenting at first the same velocity, only preserve by *accident* the distance which separates them; and if observed, the same globule will be found to present, sometimes in the same capillary vessel, three different movements.

He farther observed, that the velocity in the capillaries, is less than in the arteries and veins; and seldom greater, even in capillaries which arise directly from an artery, or which proceeds directly into a venous trunk.

Hence he concluded that the globules of the blood possess a spontaneous motion." This is the point on which we wished to remark. This conclusion was, reasoning from the *known* facts, a very logical one; still, however, it does not establish the fact that the blood is endowed with the power of spontaneous motion. Only one additional fact to those already known, is sufficient to carry through the whole process a new aspect, and bring us at last to a conclusion essentially different. If we knew nothing of chemical affinity, we might, when looking on the phenomena attendant on the union of an acid and an alkali, or a saline solution evaporated to the point of chrysalization, be induced to suppose that the inanimate substances before us possessed the power of spontaneous motion. The same may be said with regard to the influence of magnetism. The child who knows nothing of magnetic attraction, is at once easily induced

to believe a metallic duck or fish in water swims of its own accord, and by virtue of its own powers, although he may see the magnet near the side of the vessel which contains it. But if the fact of an invisible agent which we call magnetism, be brought into the calculation in the latter case, or that of the agency of chemical attraction in the former, he at once finds himself unwilling to call the phenomena the spontaneous productions of the *matter*, simply considered, but perceives a new agent of power, competent to the effects produced, and to which he feels bound to attribute the results. The same may be said of the movements observed in the tolling of the electric bells, or the performances of the electric theatre, if we knew nothing of the attracting and repelling powers of electricity.

Again, and lastly, the phenomena presented by the electrical hail storm would, but for the knowledge of the fact, that electricity is the actual cause of the various movements of the pith balls, be readily considered as spontaneous movements of those small bodies. There can scarcely be imagined a greater likeness in the manner of events or phenomena, than the play of attractions and repulsions observable in the pith balls of the electrical hail storm, to the movements of the globules of the blood, as described by Dr. POISEUILLE. If, therefore, like causes produce like effects, we may fairly conclude that the movements of the globules of the blood which have led Dr. P. to believe in the existence in the blood of a power of spontaneous motion, are purely and simply the effects of electric attractions, repulsions, &c. This is a conclusion from analogy of effects, and determining the cause in obedience to an inflexible law of philosophy. It is, if the analogy be good, a fair conclusion from *a posteriori* reasoning. But the truth of the conclusion, that the phenomena of the various movements of the globules of the blood are electrical phenomena, and dependent on the attracting and repelling powers of this wonderful agent, does not rest on this reasoning alone for its establishment. *The positively changed state of the blood, taken en masse, is itself, evident*; and this becomes the case *in the arterial system*. This being the fact, as ascertained by the comparative electrical states of the blood in the contrifugal and contripetal departments, it is evident that it receives its positive charge from the arterial sys-



tem, for there is no other source. The mass of blood is constituted partly of globules, and partly of a liquid medium in which they move. If the constituent globules of the blood receive their charge from the arteries, those first in contact with the arterial surfaces must first become charged. These then are in a positive state relative to others. By a law of electricity, these are repelled to other parts of the mass to restore equilibrium, and others are attracted. These influences, with the smaller attractions and repulsions of different globules, according to an infinitely varying electrical charge of different globules, are sufficient to account for all the phenomena observed in the movements of the globules. These equalize the entire electricity of the mass, as light bodies do the electricities of two bodies between, which they play; or as the ball suspended between two electrical bells. Such effects might, therefore, have been determined by *a priori* reasoning. But both the phenomena—the cause and its effect—are observable; either being sufficient to determine the fact of the other, if not observed, and both together evidently harmonising in all respects as proportionate cause and effect. The truth, therefore, appears plainly established by all observation of facts, and by fair reasoning from those facts, that the motions of the globules of blood are electrical phenomena, which we set out to demonstrate.

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### *Acute Articular Rheumatism.*

The following lecture of Dr. GERHARD will be found interesting in several particulars. It is a graphical description of the disease on which it treats, which is one of serious consideration, as it often involves a highly dangerous affection of one of the most important organs of the body—the heart. It is worthy the imitation of others, for the display of that candor which generally accompanies fine talents, and which honesty dictates. Whilst some would declare confidently in favor of some very certain specific remedy, or the certain results of their theory, Dr. G. has very candidly acknowledged the truth, that although many facts are known relative to this disease, still much remains unknown, and particularly in the remedial department.

The diagnosis between rheumatism and neuralgia should be particularly remarked—spinal irritation distinguishing the latter from the former, &c.

On the subject of the opium treatment of CAZENAVE, reiterated by Dr. WEBB, the experience of Dr. GERHARD is particularly worthy of the notice of all practitioners, and more especially of those of warm climates. His experiments have been carried quite as far as prudence could allow, notwithstanding the bold and confident manner in which this practice has been urged on the profession, and its reiteration by Dr. WEBB, crowned with a premium. And with these experiments his results have been such as reasoning from the known nature of things would dictate, for the place where they were made; and compare well with our own, except in the additionally deleterious influence of that practice in warmer, and what are considered more bilious climates. At best then, the remedy is not to be depended on even in cold climates, for a radical cure, and will be found absolutely deleterious in warm regions. But we give to the reader the whole lecture.

*Tuesday, April 17th.*—Dr. Gerhard remarked: I shall to-day, gentlemen, take up the subject of acute articular rheumatism, as it is especially prevalent at this season of the year, when the number of other acute diseases is very limited. In summer we have acute abdominal inflammations, and in winter affections of the pulmonary organs, while, during the spring and early summer months, serous inflammations, both of the internal and external membranes, are most common. Acute rheumatism bears some striking relations with the inflammations of internal serous membranes, from the similarity of the mode of treatment which often becomes necessary in both affections, and from the frequent complication of the latter with the former disease. In almost every severe case of the disease under notice, there co-exists inflammation of the covering of the heart, or of the serous membrane lining its cavities. Since this connection between the pathology of articular rheumatism and that of diseases of the heart and its membranes, has been clearly traced, the disease has attracted much interest. I say clearly traced, for the general fact had been long since pointed out, although the subject was not precisely understood. That is, it was in the same situation as many other parts of pathology; affording an indistinct view of the truth, but without that well defined character which is now required, according to the rules of rigid logic applied to the study of pathology. The line of connection has

only been drawn in a definite manner, for a few years past, between acute articular rheumatism and endocarditis, or inflammation of the lining membrane of the cavities of the heart, and pericarditis, or inflammation of the membrane surrounding it. Dr. Bouillaud, of Paris, has paid particular attention to this subject; he tells us that at least one-half the acute articular affections are complicated with pericarditis. In this estimate he is probably wrong, unless with pericarditis we are permitted to include endocarditis. A large number of mild cases doubtless run their course, without any complication of the kind, but it is usually otherwise when the disease appears under a severe type. Mild cases are slow in their action upon the heart, but, in the severer forms, the advance is rapid, and disease of the heart succeeds almost immediately after the first appearance of the articular symptoms. In chronic cases, the progress of the cardiac affections is slow, and an individual not well acquainted with the disease might be deceived as to the fact of its existence.

We have thus traced two forms of the disease, and I propose bringing under your notice two cases now under treatment in the Philadelphia hospital, to exemplify them.

The first is that of John Robb, who was admitted into the ward No. 2, on the 11th of April. Previous to his admission, he had been ill but a short time, being an inmate of the Alms-House, he was able to resort to medical assistance, quite as soon as is usual in private practice. He had been working on the farm of the establishment for eight months previous to his attack, and had enjoyed good health. On the morning of the sixth, he complained of slight pains in his shoulder, but continued at work; at eleven, P. M., he was taken with severe pain in the hip, which lasted four or five hours, and then, diminishing in the hip, went to the knee. On the seventh it ceased in the right knee and went to the left.

Now, from the character of the affection, thus shown, we can, without going farther, make our diagnosis. I allude to its metastatic character, as exhibited in its leaving one joint and settling in another. This is distinctive of rheumatism.

There was no pain in the ankles, but there was slight pain near the toe. You here mark the course of the disease onwards; it has reached the toe, and, showed a disposition to attack the foot. There had been pain in the right wrist, from an hour before the man's entrance into the hospital. On the ninth and tenth he had pain in the breast, which he referred to a spot below the præcordia, in the region of the diaphragm, and which lasted twenty-four hours, and was increased by coughing. Such pain is usually owing to disease of the heart, which may be merely muscular, but is more frequently caused by inflammation of the serous membranes, lining or covering the heart.



This man had been exposed to no causes of disease, other than those which he was in the habit of encountering. He had, it is true, been wet while working on the farm, but this was not uncommon with him; he had been long accustomed to working in the rain. This shews how cautious we should be in admitting causes of disease; some physicians might be disposed to attribute the attack of rheumatism to the last wetting, which could manifestly exercise no greater influence upon the man than a series of previous exposures to the same cause, of no recent standing. I look upon the particular season of the year, as the immediate excitant of the disease, and it is for this reason, that I have thought it a fitting subject to bring before you, at the opening of my course. If you take the trouble to inquire, you will find, that at this time the prevalence of rheumatism and rheumatic pains is remarkable.

The case before you being of an acute character, its previous history is not nearly so important as the present state of the individual. It is otherwise in chronic affections, in which the whole anterior history is all-important.

The condition of the patient, at the time of his admission on the eleventh, was as follows: The face was slightly flushed, and presented an expression of pain. This pain, in acute rheumatism, is remarkable; it usually prevents all exercise and confines the patient to bed.

There was slight soreness in the shoulder, but without swelling or heat; no pain or swelling in the left arm, slight soreness in the right elbow and severe pain, swelling and heat in the wrist. The same pain, swelling and heat extended to all the joints of the hand and fingers, excepting the thumb. There was some pain in both knees, especially in the left; none in the ankles; a little in the right hip, no tenderness of the spine, no cephalalgia; tenderness on pressure along the region of the ribs; this was probably the remains of the diaphragmatic pleurisy. The impulse of the heart was feeble, the second sound nearly lost, the first much roughened, a dulness on percussion nearly natural. Treatment, one grain of opium every four hours. The digestive organs were healthy.

Now, let us analyze this case. The first fact worth recollecting, is the absence of tenderness of the spine. This establishes the diagnosis between rheumatism and neuralgia. Hence, the mode of treatment which proves so excellent in the latter affection, may here fail. The state of the heart indicated merely slight valvular disease, and some muscular impediment; there was no effusion, the dulness on percussion being natural, and no creaking sound being heard.

The treatment to this case was after a plan of practice in New England, from which quarter it has been lately strongly recom-

mended ; the internal administration of opiates, pushed till felt by the patient.

During the twelfth, six grain pills of opium were exhibited, but there was no diminution of pain. Neither sleep nor cephalalgia had been induced by the opium. This is an important therapeutic point, demonstrating the antagonising action which pain exerts in regard to the effects of opium. The first sound of the heart was still rough, but the impulse rather less ; no increase of flatness. The state of the heart was, therefore, slightly improved. Pulse eighty-four, of moderate size and regular ; a grain of opium was ordered every two hours, and a laxative enema administered.

On the evening of this day, there was some cephalalgia, although no deviation of the pupils from the natural state. The dose of opium was diminished to a grain every three hours. Sleep was interrupted by twinges of pain ; sweating at night. Eruption of sudamina ; pulse seventy-two ; pain in right arm increased and extending to the shoulder. Less pain and swelling in the knees, but increase of both in the feet. The action of the heart was more regular and feeble, and the sound less rough. The disease, you perceive, was not in any manner arrested, although you note a decided improvement in the condition of the heart. There was costiveness from the opium, but this, you will soon see, disappeared. Same prescription of opium continued during the thirteenth ; hop poultices to most of the painful joints ; laxative enema.

On the fourteenth, the pain having diminished throughout the right arm, began in the left hand and wrist. Here is another point of interest : the translation of the pain from the right to the left limb by metastasis. This is a common thing in articular rheumatism, and, as in this case, the pain does not usually quite cease in one joint, before it begins in the other.

There was slight pain between the shoulders, and diminution of the pain in the knees and feet ; pulse seventy-six, fuller and regular ; this is somewhat an exception to its usual condition in the disease, it being frequent, small and quick. Skin warm and dry ; sleep very irregular ; tongue moist, with a yellowish coat ; appetite bad ; thirst ; three or four stools since the enema ; the opium had, therefore, induced no costiveness. No cephalalgia or dizziness ; slight flush ; eyes natural. Opium continued, hop poultice and laudanum to the left wrist.

On the fifteenth, the left hand was worse, and there was pain in the sole of the right foot. The other pains were better, moisture rather than sweating. Opium continued.

The sixteenth, less expression of pain, and less flush ; soreness in both shoulders, with slight swelling, but not much constant pain. Slight soreness of the left elbow ; much swelling,

pain, and heat of the left hand; right hand nearly free from swelling, still slightly painful, but motion returned; pains much diminished in the legs; pain at the ensiform cartilage; palpitations frequent after slight exertions; pulse seventy-two, and soft; decided roughness, almost rasping in the first sound of the heart, which was not very loud, and heard most distinctly to the left of the nipple, second sound nearly lost. Under the sternum, both sounds of the right side distinctly heard and clear, the first only a little roughened. The præcordial dulness commenced only at the left margin of the sternum, and extended to the nipple. The morbid alteration was therefore confined to the left side of the heart, implicating the valves; there was besides effusion into the pericardium. The opium pills were continued during yesterday and last night every three hours. Hop poultices.

Last night the pupils were somewhat contracted, and little sensible to the light. To-day, the face was flushed, and presented an expression of stupor. Disposition to sleep; pupils rather large; no cephalalgia; sleep interrupted by pain, shooting from the swollen joints. Pulse eighty-eight—softer. Swelling less marked in the left hand. Slight swelling and pain in both knees. No pain in the breast. Impulse of the heart almost lost; both sounds very feeble, without roughness. The disease of the valves is therefore diminished. Percussion slightly dull, at the upper portion of the left side; flat, down from the third rib to the same extent as yesterday. Prominence obviously increased. These latter signs are explained by the increased effusion into the pericardium. Still slight diarrhoea; three or four stools in the twenty-four hours.

This case, gentlemen, of acute disease of the heart, occurring in articular rheumatism, may serve as a type of the affection, which I shall now make the subject of some general remarks, and have occasion to refer to hereafter. There are several peculiarities to be alluded to. In the first place, the changeable character of the affection, shifting, as you have seen it, from joint to joint, denotes the nature of the disease. This is well understood, and universally admitted. But I would have you remark, that there was no *metastasis* to the heart. The disease of the heart appeared, during the most acute stage of the rheumatic fever, which afterwards continued with unabated severity. By physical examination, we ascertained that the pain in the præcordial region proceeded, first, from disease of the valves, indicated by the roughness of the sound; secondly, from effusion, shown by the unnatural dulness on percussion, imperfect action of the heart, &c.

Another symptom to be noticed, is the sweating, which was very slight from the first or second day, although it is generally very severe in acute rheumatism. It is this sweating in rheu-



matism, which has suggested the employment of Dover's powder, and other sudorifics, in its treatment. In this case, opium was alone resorted to, to afford a better test of the powers of the remedy.

The diarrhœa is another feature worth remarking, co-existing, as it did, with the large doses of opium. It was a purely accidental complication, but its occurrence demonstrates that opium, in very large doses, does not produce the same effects as in ordinary doses, thus illustrating a therapeutic law, that remedies, in over doses, do not act upon the system in the same manner, as when administered in the usual quantities. Were it not for this law, patients would die from the action of certain remedies now frequently prescribed. How could tartar emetic be given in the high doses required by the contra-stimulant practice, in pneumonia, or calomel, as it is prescribed in the diseases of certain sections of our country?

The pathology of the disease under consideration is still very obscure, although its symptoms are well understood. How much of the disease is like neuralgia, or connected with an affection of the nervous system, and how much belongs to local inflammation, are points that are still unsettled. It is, in this respect, analogous to whooping-cough, and some other diseases. We are just as much in the dark, as to effectual curative means for arresting the progress of the affection, though we have any number of palliatives. For the present, I refrain from expressing an opinion as to the pathology of rheumatism, but shall consider it partly as nervous and partly as inflammatory in its character. Certain inflammation of internal organs which occur in rheumatism, such as pericarditis, lose this doubtful character, and become decided phlegmasiæ; they are accordingly treated without reference to the disease of the joints. When the complication of pericarditis proves fatal, and the opportunity, otherwise rare, of examining persons who die with rheumatism, is obtained, there is almost a total absence of lesion in the joints; but the pericarditis offers the same characteristic appearances, as if it had been induced by exposure to cold, or injury, or some other ordinary cause. The affection of the joints depends so much on a nervous cause, that it presents very slight traces of inflammation. It never terminates in suppuration, or the other usual terminations of inflammation. Dr. Chomel states, that pus is not found in rheumatic joints; the very rare cases in which it is met with, he considers to be mere accidental complications. This opinion, if somewhat modified, is probably the correct one; that is, rheumatic differs from ordinary inflammation in the absence of pus, and its want of fixedness of position. Not so with the accompanying internal inflammations; they re-

sult in the secretion of pus, and effusion of lymph, and are fixed in their locations.

If the pathology of the disease is obscure, equally so are the therapeutics, it being more than doubtful that we possess any exclusive available method of treatment. This subject is very clear, no doubt, to some authors; but, unfortunately, practitioners generally are in the dark. Thus Bouillaud, who regards the affection as merely inflammatory, depletes to the utmost possible extent; and for this exaggerated depletory practice claims great success. His success may have been great, but others who have followed the practice, perhaps without the same enthusiastic confidence, have not been so fortunate. I have given the practice a very fair trial, with every disposition to see it succeed, and, although I have afforded relief by one or two moderate bleedings, if persisted in, the result was unfavorable; if pericarditis was present, it was only partially relieved, while the rheumatic affection of the muscular substance of the heart always increased. We thus merely return to the old practice of one or two bleedings at the commencement of the affection; a practice, the utility of which is sanctioned by long experience.

Another practice, originating, I believe, in New England, and recommended by Dr. Webb, of Providence, is that which has been followed in the present case—consisting in the administration of very large doses of opium. I have tried it in two cases, in both of which it failed. It succeeded in stupifying the patient, and rendered him less sensible of pain, but produced no decided impression on the disease. It did not prevent the change of place, nor did it remove the pain or swelling. These symptoms persisted, and retained their usual mutability of character. Last summer, I pushed the remedy to such an extent as to induce decided narcotism, yet it failed to cut short the disease. The remedy may occasionally obtain the success which is claimed for it, but is clearly no specific.

Sudorifics are the treatment adopted by some, from a notion that artificial sweating is but an imitation of the curative process of nature. This is certainly not the case; for the sweating is most profuse, while the violence of the disease is persisting. If, however, this discharge be suppressed, from cold or any other cause, it will be proper to resort to sudorifics, to revive this natural secretion, and to restore to the patient what he has been deprived of.

Other remedies have been recommended, as narcotics and purgatives, particularly the colchicum, and, what is analogous to it, the veratria. The colchicum is used in this country and in England, but is not much employed in France. It is very useful as a palliative, though far from being absolutely curative. I have seen it stop the severer symptoms of the disease for as much as

five or six successive days. I used it at the hospital, in an uncombined form, preferring, as I do, the administration of simple remedies, particularly in hospital practice, to ensure their accuracy of administration, and to enable us to judge of their effects. By giving the wine of the roots or seeds, alone, we may avoid the severe purgation resulting from Scudamore's mixture. Purg-ing may be of service, if the patient can readily bear the motion necessary for the evacuation of the bowels. But the disadvantage, attending frequent rising, is apt to more than destroy the good arising from the revulsive effects of the purging. In medicine, as well as in surgery, inflamed parts must be kept at rest.

These views, as to the effects of remedial agents in rheumatism, differ but little from those of Dr. Chomel, who, perhaps, has more than a due share of skepticism, in relation to therapeutics. It is true, however, that, when diseases, after running a certain course, get well of themselves, they are apt to deceive us as to the value of the remedies employed in treating them. This, I think, is the case with Drs. Bouillaud and Webb. For the opinions of the former of these physicians on this subject, I refer you to the Select Medical Library; and for Dr. Webb's, to the Boston Medical and Surgical Journal, for last year.

I am not disposed to enter into a history of all the different sorts of medications, which have been recommended in rheumatism. Of external applications, cups to the spine, as a counter-irritant, is a most valuable palliative; and, if the neuralgic element of the disease predominates, cupping along the spine will sometimes produce a real arrest of rheumatism. But, when the joints are the principal seat of the disease, in most cases much is not to be expected from cups or leeches to the spine; they do better near the joints. Other applications to the parts are directed for the benefit of moisture and warmth. For this purpose, anodyne poultices are useful; none are better than one of hops, steeped in hot water, or vinegar and water, sprinkled with a little laudanum. These are very convenient applications, but cannot be accommodated to all the joints. Opiate frictions may be used, as with a mixture of warm oil and laudanum. I refrain from lead-water, or spirituous, or other stimulating embrocations, as the danger of the internal affections, endocarditis, or pericarditis, is somewhat increased by driving the affection from the joint. This practice must be reserved for the sub-acute variety of the disease.

Other local applications of a soothing character may be resorted to, such as the experience of every practitioner will suggest. In the North, there are other remedies, the virtues of which are much extolled, such as the green hellebore, *actæa racemosa*, &c. These plants have been tried here, but without the success which is claimed for them. This want of success may depend on our obtaining them only in the dry state, in which their vir-



tues are impaired. But I cannot believe that this is the sole cause of failure; for the most decided action of the remedies will sometimes be produced, without curing the disease.

Though not immediately dangerous, few affections are ultimately more mischievous than acute rheumatism. Diseases of the heart are so apt to originate with it, and to continue after its cessation, that we must hail any plan of treatment, likely to exercise a curative influence over it. I have therefore tested the opiate practice, as the last which has been recommended, watching very carefully its effects. I certainly pushed it as far as was prudent; I was not warranted in giving more than one grain every two hours, particularly, as I could not see the patient after each dose, a precaution which is always advisable when giving high doses of opium.

In other cases of the disease, I am willing to try other modes of treatment, which are highly recommended, although I fear that they are all merely palliative, and as such only, may do good; at last we may find some one more efficacious than the others. I am doubtful as to immediate success, though strong in hope. I cannot help agreeing with Chomel, sceptical as he is generally, in believing inflammatory rheumatism an affection not to be cut short by remedies, after having seen so much protracted suffering from it; even in the case of physicians, who were treated under the most favorable circumstances, it has been prolonged to four or five weeks and upwards.

What is the natural duration of acute rheumatism? It is not precisely fixed, but it is scarcely ever less than two weeks, and may last five or six months; at least, the immediate effects may continue so long. Like most diseases that run a determined course, it averages two or three weeks.

Of the second patient, whom I mentioned, my time will allow me to say little or nothing. He offers signs of the disease of the heart, different from the last, chronic dilation and slight hypertrophy, without disease of the valves, the sounds not being at all roughened. There is effusion in the pericardium, indicated by the increased dullness on percussion. Further details I reserve for another occasion.

## PART III.

## MONTHLY PERISCOPE.

CORRECTION.—We take great pleasure in correcting an error in our last (March) No., which is in the fifth line of the second paragraph, under the head "Lithotomy," page 479, where it will be found that our printers have made us to say, "we are bound to attribute whatever *little* success which may have followed Dr. DUDLEY's operations for the stone, &c." It should be read, as written, "whatever *better* success, &c.," for neither truth nor justice, would have allowed, nor inclination induced us to speak contemptuously of a success so creditable as Dr. DUDLEY's has been in the practice of Lithotomy; or pluck one leaf from the laurels he has fairly won by his achievements in this hitherto formidable, but now safe operation. We wished to hold up to the view of others, Dr. DUDLEY's real success, and the means by which he arrived at it, for their imitation. It was for this reason that we gave the whole of his very expert, dexterous and complete operation, as given by Dr. BUSH; and attempted to impress on the attention of the reader the importance of "due preparation of the patient," and "good nursing and subsequent management."

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*Hydrops Articuli.*

We are informed by a slip in the British and Foreign Medical Review, from the Medicinische Zeitung, that "a MUSKETEE" had been affected with dropsy of both knee-joints for a period of five months, and the disease had resisted a variety of treatment which had been employed for its removal. At the end of this time he became the subject of a violent inflammatory fever, a consequence of which was the cure of the effusion into the

knee-joint; for on the day following the appearance of the fever, there was no trace of fluid in either knee-joint."

It will be fresh in the mind of the reader after seeing the operations of VELPEAU, TRAVERS, KEATE and LEWIS, for hydrocele of the tunica vaginalis testis, which we have noticed in the second part of this No., as well as Mr. O'BEIRN'S operation for hydrocele of the neck, and with the chlorine gas, of DEBLOIS and the vinous injections of others for this disease, that by the time a certain degree of increased action may have been produced, a new set of phenomena in the part is to be expected. In some cases, (those of vinous injection after complete evacuation) adhesion ensues and obliterates the sac. This of course would not be suitable to hydrops articuli. But in other cases, as the puncture with one or more needles, or very small trocars, or the seton of a single thread, when the fluid is not evacuated from the cavity; or even after the operation of VELPEAU, in which a considerable part of the injection of the tincture of iodine and water is left in the sac, an effectual absorption takes place, whereby the fluid contained is promptly removed, and this removal is followed by a healthy condition of the part. What is the rationale of this, but that by a certain increased action in the vessels of the part, absorption is effected, whereby the morbid accumulation is removed, and the secretion or deposition and absorption of the part left in equilibrio. It is not to be supposed that the single puncture with the finest acupuncture needle which will be able to reach the cavity, or the passage of a seton of a single thread will ever, merely by the opening in the part, *evacuate* the contents. The operation of these must, therefore, only produce an increased action sufficient for effecting *absorption*, and not such as affords the means of adhesion, and consequent obliteration of the cavity. Such a remedy would therefore be suitable to our purposes in the case of an hydropic joint, in the treatment of which we should wish to avoid adhesion because this would probably be followed by ankylosis. It appears to us that the same doctrine is declared by the case now under notice, in which "*hydrops articuli*" was cured by the "violent inflammatory fever" which supervened; and that the suggestion of the adoption of the single puncture, or single thread seton in hydrops articuli, is abundantly strengthened by the result of this case.



It should, however, be borne in mind that, as in many other things, just enough, and neither more nor less, is the only proper quantity of action which may be calculated for answering the desired purpose: for in operations for hydrocele by vinous injections, which are retained until certain pains evince a certain degree of excitement, the cure is not effected always, unless the injection be so full as to be applied to all the sac; and even the numerous punctures have been thought to not answer so good a purpose as a single one; nor did the large seaton once used prove so uniformly successful as the single thread of Mr. O'-BEIRNE. This was because the adhesion was partial, and the proper action not left in the other parts. But in the use of the dilute iodine injection, the pains which characterize an irritation sufficient to end in adhesion and obliteration, are not expected; and in the single puncture, and the single thread seaton, they are not known—still the pathological state of action, as well as its effect, the accumulated fluid, being removed, the physiological condition of the part is permanently restored.

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#### *Hydriodate of Potash in secondary Syphilis.*

M. BULLOCK has reported in the *Edinburgh Med. & Surg. Journal*, "the particulars of eleven cases of secondary syphilitic diseases, of formidable character, relieved by hydriodate of potash, administered internally, in doses of eight grains, three times daily, in camphor mixture. The symptoms were—distruction of the uvula and soft palate, or nodes, with nocturnal pains, on the tibia, ulna, frontal, and malar bones, and affection of the bones of the nose, or rupia and other tubercular eruptions. The period of cure was from one to two months. The patients were treated by Dr. WILLIAMS, at St. Thomas' Hospital. They were all adult males."—*British & Foreign Review*.

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#### *Chloride of Soda in Typhoid Fever.*

On a former occasion, (*South. Med. & Surg. Jour.* vol. 1st. p. 103.) we noticed the interesting paper of Dr. GRAVES, read before the medical section of the British Association, on the subject of the "Internal use of Chloride of Soda in Fever," in which was contained the experience of several other most eminent practitioners as Drs. CHOMEL, DOR, STOKES, &c. We have also

mentioned the limited experience, but satisfactory success of our own practice with the article which heads this paragraph. We now take great pleasure in referring our readers to the experience of ALFRED HUDSON, M. B. T. C. D., physician to the Navan Fever Hospital. "As a routine practice," says Mr. HUDSON, "I think the solution of chloride of soda is to be preferred to any other, provided that it be given as soon as possible after the type of the fever is known, which, in many cases, means, of course, as soon as the fever has set in. I cannot say that I have seen such good effects from its use in more advanced stages, though I have prescribed it in a large number of such, and still do so; not, however, to the exclusion of any one of our tried and approved remedies." But he has noted forty-seven cases of typhoid fever, in which he commenced its use as soon as the patient was admitted, or the type of the fever was evinced by the appearance of petechiæ, &c. and in every instance, with the best effects; this being (in many cases,) the only medicine given. His doses were from ten to fifteen drops. "In some cases, the effect of the chloride was evinced by the change of color and diminution in number of the petechiæ, 'taches rosées,' within twenty-four hours, shewing, I think, that its action is exerted directly upon the blood, and not as a stimulant of the nervous system, as a late writer in the Dublin Journal seems (erroneously surely,) to have inferred from Dr. GRAVES' paper on this subject." "For myself," continues Mr. HUDSON, "while my limited experience leads me to place the fullest confidence in the chemical effects of this medicine, given early, I have not the least reason to attribute any stimulant powers, nor indeed any good effect whatever to it, in that stage of prostration and adynamia, which Dr. GRAVES has so graphically described, and in which he considers the chloride a remedy worthy of confidence."

The typhoid character of fevers is generally less perfectly formed, and prevails less frequently in this section of the United States, than in France, England, or our northern states. Consequently our experience in these fevers is comparatively very limited; but in a considerable number of cases, we have adopted the use of this chloride in that stage of them only, in which Dr. GRAVES found it peculiarly beneficial, and with a very satisfactory success. In its use, as in that of all other things, great care should be given to the *quality* of the article.

*Amputations.*

We request that we may not be misunderstood by our highly respected Boston cotemporary on the subject of amputations, or surgical improvements in any respect. We had several points in view in offering our animadversions on the essay on the subject of amputations, over the signature X. X. One, and not the least of these, was to disapprove of the practice of communicating for, or inserting in medical journals, essays or medical intelligence of any kind, without a sufficiently plain reference of the public to a source, responsible for its truth—a custom, of which, if our memory serve us faithfully, our Boston friend has been compelled to complain. We would not be understood to insinuate that the alledged facts in the case of the amputation of the toes of the young lady of Pembroke were not as stated; but that as there is no good reason for withholding the personal evidence of the truth of such cases, there was not only a *want of evidence* of, but a reasonable latitude for skepticism relative to the truth of such communications: for the delicacy in such cases is always relative to the patient—the physician being at liberty to report facts of almost every description calculated to benefit the profession, provided always a due regard to professional secrecy towards the patient be observed. During our short editorial service, we have not been without some perplexities from this source; but we have not been willing to offer to the readers of Medical journals, matter which, although highly interesting and important, if duly set forth with responsible references, is accompanied by none of that personal responsibility to which we must look as the best evidence the nature of the case admits; and without which, we are not justified in adopting views essentially different from previous, and perhaps, pretty well approved usage. These remarks relate of course to those communications or essays, the worth of which rests on the alledged facts of experience or observation. They cannot be used in inductive medicine without they possess some obvious and reasonable claims to credence.

Logical disquisitions, or rational discussions of subjects abstracted from facts not generally admitted, are essentially different. Here the merit of the piece rests on the fairness and accu-



racy of the reasoning process, and this is fully exposed to inspection.

Ideas purely theoretical, and not the legitimate deductions of true premises are different again—needing, for their admission to serious examination, some knowledge of the character of the mind from which they emanate. But, for these productions, we have little use in inductive medicine. These have been, and still are, the great *fons et origo mali* in medicine—equalled by nothing, unless it be by inductions from false premises.

Another purpose we had in view in noticing the anonymous communication referred to; and this was, to endeavor to guard the mind of the young practitioner against the dangers of routinism, of which, there is danger in surgery, as well as in general practice; and to point him to the charter of his liberties, in the wide range of our rational science. The treatment of every case, whether surgical or not, must be regularly and accurately deduced from the premises it affords; and no man, whatever may be his other claims to confidence—whatever may have been his good opportunities, or whatever the honors which favoritism may have heaped upon him, who has not the industry to accumulate a knowledge of fundamental facts and established principles, and the intellectual faculties for their proper use in inductive reasoning, should ever presume to pollute the sanctuary dedicated by humanity to inductive truth.

Nor would we be supposed to “object to having the profession put in possession of the surgical opinions and experience of the best surgeons in the union.” Far otherwise indeed; for we feel little disposed to go beyond the 7th degree of longitude east of Washington, in search of the best surgical tact and judgment. We solicit such “opinions and experience;” but when they do come, we wish to know the source from whence they come, more than we do that of the Nile. And furthermore, we wish every opinion which is founded on good reason, and every fact ascertained by enlightened experience, which can tend to usefulness in surgery, as well as every other department of medicine laid before the profession; and of course, a well written “treatise on amputations.” But we do not wish to see in any country, and more especially in this land of freedom, where intellect is bounded only by the limitation of its own powers, a fixed formula laid down by authority, to which all must servilely bow, or be

chargeable with mal-practice; and this too, for application to cases as various as human physiognomy. We have witnessed too much of the injurious effects of the passionate extremes of *solidism* and *Humoralism*—too much of the violence of *Brunonianism*, and the ruinous tendencies of the *gum tea* and other *expectant* fungi of the exploded physiological doctrine, and too much of the culpable lethargy of the medical mind in all matters demanding the exercise of the rational faculty, to be disposed to tolerate the least surrender of the powers or privileges of a sound intellect, well stored with facts, to a formula for cases, the valuable nature of which must needs require different inductions from a rational view of their facts.

We are free to reject the doctrine of identity of venereal and other excitements—the identity of gonorrhæal and syphilitic poisons, and the only gastric and enteric origin of pyrexia; and we are no less free to reject the high example of LIS FRANC, of leaving a wound open for hours, in order to secure adhesion. But why dare we do these things, but that we know better, and feel at liberty to do according to our knowledge. The same right have we, to exercise on the manner, location, dressing, &c. of an amputation—*reasoning fairly from the premises in the case*, perfectly regardless of any authority or custom, except so far as it affords us facts from which to reason.

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*Epileptic Fits cured by the Trephine.*

In a late number of the Boston Medical and Surgical Journal, we have the result of the very interesting case of the Rev. E. W. SEWELL. This was a case in which there was a diseased condition of the bones of the skull, on the left and upper surface of the head. The patient had not only been in pain, more or less, for twelve years, but was subject to sudden and violent fits, as they are commonly denominated, which sometimes continue without interruption, nearly two hours. He had been several times of late, deprived of consciousness, and thrown into violent spasms while officiating in the church, of which he was pastor. Under these circumstances, Dr. GEORGE HAYWARD, his surgeon, determined on attempting to relieve the obvious pressure on the

brain by the operation of the trephine at the point which seemed to be the focus of the disease. He accordingly removed a button of bone about three quarters of an inch in diameter; when, on the instant of raising the bone from the brain, the patient said he had not been so free from pain in twelve years before. There has been no return of epilepsy; the wound is nearly healed, he feels well, and there is every reason to believe he will soon return to his church and society in perfect health. The pulsations of the brain are now seen on his head, precisely as we notice them in young children. By compression of the brain, the whole machinery of the body was thrown, at times, into irregular spasmodic action, destructive and increasing.

The result of this case is highly creditable to the judgement of the surgeon, Dr. HAYWARD. We have the promise of a full report of the case.

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### *Liquor Opii Sedativus of Battley.*

This preparation, which has been made according to a secret formula for many years, is said to be formed simply by macerating opium in distilled water for a given time, at an equable temperature (that of the laboratory,) with free access of light and air. About a seventh part of alcohol is added at the end of the process, in order to preserve the liquor.

M. BATTLE'S "*Liquor Cinchonæ*," is prepared by macerating seven pounds of coarsely powdered bark in seven gallons of distilled water for twenty-four hours, straining and evaporating, to a certain extent, in wedgewood dishes. About four ounces of spirit may be added to preserve the liquid. It is said to be a preparation equal to quinine. Seven or eight drops are a sufficient dose.—*American Journal—from the Lancet.*

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### *Polypus within the Uterus, removed by Ligature.*

Dr. BUCK of Lübeck, narrates a case of successful treatment of polypus within the uterus by ligature. He professes to have been taught by experience that, contrary to the generally received opinion, polypi arising even from the fundus of the



uterus admit of the application of, and removal by the ligature, notwithstanding they are still retained within the cavity. He says that when the *os tincae* is open, it is practicable to apply a ligature to the polypus thus situated, and that this operation is always indicated when the inactive state of the organ renders it incapable of protruding its contents into the vagina, especially when the constitutional disturbances endanger the life of the patient. Although it is fortunately the case that this state of things rarely occurs, yet the case of Dr. BUCK proves both the possibility of occurrence, and the practicability of successful treatment. It is possible indeed, that these cases are of much more frequent occurrence than has been supposed; and the case in point should lead to a more ample investigation of those cases of uterine affections which we too often consign to their fate as hypertrophy, carcinoma, corroding ulcer, &c. And it should be further remarked, that in consequence of the disagreeableness to the practitioner, and his impatience, in such investigations, together with the feelings of delicacy on the part of patients, uterine diseases generally are shamefully mistreated, and their bearings relative to other affections, as cause or effect, so little understood as to leave the practitioner, most commonly, without the knowledge necessary for sound induction, and consequently, the patient, to a loose, imperfect, and unsuccessful treatment, or no treatment at all.

"In January, 1834, I was called to see a poor woman, who gave me the following account of her sufferings:—She was 46 years old, had previously enjoyed good health, and was the mother of six children. Since the death of her husband, which took place nine years before, she had abstained from sexual intercourse. Two years previously, she was seized, in place of the ordinary menstrual discharge, with a violent hæmorrhage, which ceased after a duration of eight days, and for the space of a year did not return. In this interval she began to suffer from an oppressive sense of weight in the belly, pricking pains in the side and in the pelvis, difficulty in voiding urine, and a dragging sensation in the sacral and lumbar regions.

These symptoms gradually increased in severity, and about Whitsuntide, 1833, hæmorrhage from the uterus again took place and continued to recur at short intervals until about six weeks before the period of my visit, when it ceased altogether, and a fluor albus, having an offensive smell, appeared in its place. I found the patient in a state of extreme emaciation, ca-

chetic in her appearance, and so weak as to be scarce able to leave her bed. She complained of violent pains in the iliac region, which were augmented by pressure, and from time to time of slight pains resembling those of labour; her appetite was bad, her pulse small and quick, she coughed a good deal and vomited occasionally.

On making a manual investigation, I found the uterus in its normal situation, the lips thin and flaccid, and the os uteri itself open, so that it admitted the index finger with facility. Within the organ, and apparently arising from its fundus, a polypus was clearly to be felt; it had the circumference of a large pear, was insensible to moderate pressure, and did not quite reach to the external orifice of the uterus. The parts were covered with a mucous exudation streaked with blood, and of an offensive smell.

I directed a plain treatment calculated to improve her general health, in the hope that the labour-like pains would at length expel the polypus from the cavity of the uterus. Deceived in this expectation, I prescribed 24 powders, each of which contained half a scrupel of *secale cornutum*, and these failing to produce any effect, nine others containing one scruple each; the latter were all taken in 36 hours; nevertheless, the uterus still remained in a state of inactivity, and even the stomach, an injurious action upon which has been attributed to this medicine, was not in any way affected by it.

Dreading the difficulty of applying a ligature to a polypus so situated, and as there was no dangerous hæmorrhage, I still waited, hoping that the powers of nature would finally effect the desired protrusion. But the health of the patient daily grew worse, the mucous secretion became more and more copious, and the cough, which had hitherto been dry, was now accompanied by an abundant and ill-looking expectoration, together with pains in the breast. Frequent though slight febrile paroxysms, nocturnal sweats, and a watery diarrhœa, added to the prejudicial influence of many privations, and the want of proper attendance, soon reduced my unfortunate patient to a state of complete marasmus, so that I already believed her end near, and certainly under these circumstances should have desisted from all operative proceeding, had I not convinced myself from previous experience, that now, the speedy removal of the polypus alone afforded a chance of recovery.

With the assistance, therefore of Dr. Pabst, I undertook to apply a ligature around the root of the polypus, selecting for this purpose Jörg's double canula.\* The patient being placed upon

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\* I chose this instrument on account of its length, but found that the curvature at its upper end rendered the operation more difficult, and I now employ in preference, two straight silver canulas which separate and unite with great ease.

a cross bed in a half-sitting position, I introduced the instrument previously oiled, and provided with a thread upon the left index finger, and pushing it carefully through the os tincæ, between the polypus and the yielding uterine parietes, carried it as near the root of the tumour as possible. One canula being firmly held in this position, I at length succeeded, after many fruitless attempts, in passing the other one, with its cavity always turned towards the polypus, fairly round the pedicle, and I now joined the two together. The pain occasioned by the unavoidable friction on the inner surface of the uterus, was trifling, nor did this stimulus provoke the organ to the slightest contractile effort. On tightening the thread, I was convinced by the insensibility of the parts, that I had not included any portion of the uterus, a circumstance the more to be dreaded, as the point where the ligature was applied, was quite out of the reach of the finger. During eight days, I daily drew the thread tighter, it then broke, and on examination I discovered that only half of the polypus had sphacelated away. A re-application of the ligature was successfully effected, though not without considerable difficulty, as the body of the tumour had much diminished in size and firmness, while the pedicle seemed proportionally thick and sinewy. In the mean time, the injurious influence of the copious and highly fœtid discharge was, as far as possible, counteracted by the frequent use of antiseptic injections.

In the course of a few days, the last ligature came away, and at the end of a fortnight no remains of the polypus were discoverable; the uterus, too, had contracted, and the os tincæ soon after assumed its normal form.

The patient, who had hitherto been lying in an almost hopeless state, now recovered strength surprisingly fast; the diarrhœa, fever, nocturnal sweats, and puriform expectoration quickly disappeared, and at the expiration of two months, with the aid of tonic medicines, she was restored to perfect health."—*Med. Chirurg. Rev.* July, 1836, and *Rust's Magazine*.



# SOUTHERN MEDICAL AND SURGICAL JOURNAL.

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## PART I.

### ORIGINAL COMMUNICATIONS.

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#### ARTICLE I.

*Case of extraordinary enlargement and ossific transformation  
of the Ovaria. Communicated by E. GEDDINGS, M. D.*

The utility of publishing isolated cases of disease has been much questioned, and at the present time especially, when efforts are every where being made to substitute observation for speculations, it must be confessed, that there is too great a propensity to swell the Archives of medical science with detached facts and observations, many of which are too devoid of interest to repay the labor of giving them publicity. The case I am about to offer, may perhaps be considered by some, more as a pathological curiosity, than as a fact capable of admitting any useful induction. I will not pretend to claim for it the highest rank in the scale of importance, in regard to therapeutics; but think, nevertheless, that it possesses some interest in relation to pathological science. For the few details I shall be able to furnish, relative to the previous history of the subject of the case, and the origin of the disease, I have been indebted to my friend

and colleague, Prof. H. R. Frost, to whose kindness I also owe the interesting opportunity of examining the body after death.

The subject of my remarks was a black woman, aged 60 years, the mother of two children. Her occupation was that of a field-hand, in which situation she was able to perform her task. Her general health was good, and her principal complaint was occasional pain of the abdomen, sometimes followed by convulsions, which generally yielded to a dose of castor oil. She became pregnant of her second child at the age of twenty years—was delivered safely at the usual time, but had a painful parturition. Shortly after delivery, a swelling was observed in the lower part of the abdomen, which increased so rapidly, that she soon became as large as before her confinement. She continued to menstruate, and had no children afterwards. This circumstance, together with the tumor of the abdomen, induced her to believe that she was *tricked* (bewitched.) All attempts to influence the tumor by medical treatment, were unavailing, and for some time before death, her abdomen presented the appearance of that of a female in the last stages of pregnancy. She continued to be useful to her owners almost to the last, and finally died suddenly of convulsions.

*Necroscopy.*—The body presented no appearance of emaciation. The large abdominal tumor was round, hard to the touch, and slightly uneven on the surface. It reached from the pelvis to near the ensiform cartilage of the sternum, and was slightly inclined to the right side. On laying open the abdomen, the tumor was found to occupy the right ovarium. The whole of the anterior part of its circumference adhered so closely to the inner surface of the abdominal parietes, especially at the umbilicus, that considerable difficulty was experienced in separating the attachment. In the right iliac fossa, it was adherent to some of the convolutions of the small intestines, and in its circumference, from right to left, it was firmly united with the ascending, transverse, and descending colon. Behind the line of this latter adhesion, the posterior surface of the tumor, equal to about one half of its extent, was perfectly free and smooth upon the surface—most of the convolutions of the small intestines resting between it and the posterior part of the abdomen.

The tumor was detached from the parts with which it adhered,

and removed from the abdomen, with the uterus annexed. It was of an elliptic, or ovoid shape; somewhat uneven upon the surface; was covered by the thickened peritoneum, and upon its anterior part, with the false membranes by which it had been tied to the neighboring structures. The uterus was healthy, and presented the right fallopian tube extending to the body of the tumor, in which it was lost. The entire weight of the latter was fifteen pounds. In its longest diameter it measured nine inches: the transverse diameter was seven inches and a half: the lateral diameter eight inches. The portion which adhered to the umbilicus was somewhat soft, and presented evidences of fluctuation. When cut into, about eight ounces of curdy matter was discharged. All the rest of the tumor was so hard and resistant, that it could only be divided with a saw. From three to four fifths of its substance was composed of bone, part of which existed in form of homogenous solid masses, possessing the ordinary properties of bone, while in other portions, the osseous tissue was deposited in form of plates and spiculæ, united by a firm, tough, fibrous tissue. The ossific transformation was not confined to the external fibrous envelop of the organ, but was disseminated through its entire substance, and had supplanted every vestige of its natural structure.

Partial ossific transformation of the ovaria, is by no means of rare occurrence; but I know of no instance in which it was as extensive as in the case just detailed. In most of the examples, indeed, that have been reported, it was either confined to the fibrous envelope of the organ, or if it occurred in the proper substance of the ovaria, it was merely in form of small isolated particles. It is proper, nevertheless, to remark, that calcarious deposits of considerable size are occasionally found in the same situation, many of which, have doubtless been described by persons not accustomed to make pathological investigations, as examples of ossification of the ovaria.

As some of the readers of this journal may be anxious to know some of the cases of osseous and culcarious deposite in the ovaria which have been recorded, I shall subjoin a brief synopsis of such as I have been able to find, by a hasty reference to the materials of my own library, premising, that the list might be extended by more extensive research.



DRELINCURTIIUS reports the case of a lady of noble birth, the mother of five children, who died of a disease of the left ovary. It contained fifty pounds of fluid—some limpid—some albuminous and meliceric, and, besides, a gypseous material, through which many rough, hard, spiculæ were disseminated.\* Two instances of more extensive ossific transformation have been described by MORGAGNI. In the ovary of a female, who died of an affection of the chest, besides several small vesicles filled with fluid, we found two large empty cells, the tunic of one of which was composed partly of bone: that of the other was entirely osseous, and presented upon its surface numerous inequalities, similar to the convolutions of the intestines.† The other case was that of a hysteric female, who died a few hours after delivery. In one ovary, an osseous cell was discovered, containing a grumous fluid.‡ STORK has reported a case in which an osseous concretion, as large as a pea, was formed in the lower part of one of the ovaria||; and in one instance observed by WALTER, a hard ossious concretion, as large as a nut was situated beneath the membranous envelope of the ovary. The individual was a female, aged 32 years.§ LE CLERC found the right ovary of a female, aged 60 years, as large as two fists, and disseminated through its substance,¶ there were numerous small points of ossification. In the case of an old woman, whose body was examined by NICOLAI, the right ovary was as large as a goose-egg, and the inner part of it was ossified.\* FRANK also mentions the instance of a barren female, in whose ovary a small bone was discovered after death.† The following case, reported by CHOPART, is more interesting. A female, aged thirty years, who had enjoyed good health, experienced an unusually copious flux of the menses, which continued beyond the ordinary time. She had no subsequent recurrence of this evacuation, and as her abdomen soon began to enlarge, she fancied

\* Bonetus. Sepulchret. Anat. Tom. II. p. 491.

† De. Sed. et. Caus. Morb. Lib. iii. Epist. xlvii. 28.

‡ Ib. Epist. xlviii. 41.

|| Annus Med. ii. p. 266.

§ Obs. Anat. Cap. iii. p. 54.

¶ Roux. Journ. de Méd, Tom. zii. p. 530.

\* Decas. Observ. Argmt. 1725 In Haller. Disp. Anat.

† Sammlung. Bd. v. p. 179.

herself pregnant. At the fifth month, she even imagined she felt the motions of the child, and the same sensations were experienced up to within a fortnight of her death, which took place nine months after the period of her last menstruation. The house surgeon of Hotel Dieu, who was called upon to perform the Cæsarian operation, found in the abdomen a tumor, which he at first mistook for the uterus containing a fetus. It proved to be an ovarian tumor, which on being opened, discharged a sanguinolent serosity, and seemed to be composed, in part, of an inodorous parenchymatous substance which occupied the two upper thirds of the tumor. The other third was occupied by an osseous concretion, which was extremely hard, of the shape of the cranium of an infant, concave within, and so intimately adherent to the walls of the cyst, that it was with difficulty separated by dissection. This mass of bone was more than an inch thick in the centre, extremely hard and rough on the surface, and weighed twenty one ounces. The walls of the cyst also contained several laminæ of bone in their substance.\* In a case observed by SCHLENUCKER, the left ovarium was hard and stony, weighed three ounces.† Voigtel‡ refers also to GRAAFE, CAVALLINI, LUDWIG, SAVIARD, DE HAEN, SANDIFORT and CHAMBON DE MONTAUX, for other examples of osseous and stony concretions of the ovaria; and MUCKEL mentions, that he has not unfrequently found ossious concretions in the substance of the ovaria of young females of pleasure.§ In a very interesting case described by HOOPER, in which an ovarian dropsy burst through the walls of the abdomen, and discharged a large quantity of gelatinous fluid, the surgeon in passing a bandage round the body, heard a rattling noise within, and passing his fingers through the opening, he easily detached and pulled out, several portions of bone, of angular shape, some two inches long, and about one in thickness, others smaller. Still the rattling was occasionally repeated: another surgeon was sent for; and it was determined that the opening should be enlarged, which was done, and several more of larger size were extracted. The wound healed, and the lady lived many years.

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\* Chopaet. *Maladies des Voies Urinaires* Tom. 1. p. 307.

† Haller *Disput. Med.* Tom. iv. p. 419.

‡ *Handbuch der Pathologischen Anatomie* Bd. iii. p. 510.

§ *Handbuch der Pathologischen Anat.* Ed. iii. p. 255.

The origin of these osseous transformations of the ovaria must be explained upon the same principles that influence analogous changes in other organs. In consequence of the operation of causes, often diverse in their character, a perversion of nutrition takes place in the component structures. They require an increase of developement; new materials are deposited in their substance; and their proper texture becomes either notably altered, or it is transformed into one of a totally different character. The fibrous tunic of the ovaria seems to be the part most prone to take on ossific transformation; but in undergoing this change, it first becomes thickened and indurated—then cartilaginous, and finally bony. The pathological condition in question is not however, confined to this structure. There is some reason to suspect, that the delicate membranes surrounding the graafian vesicles, which we know are very liable to become the seat of enormous watery accumulations, as in the encrysted forms of ovarian dropsy, not unfrequently participate in similar changes to those which take place in the external fibrous covering. Hence, it is common to find large watery cysts in the ovaria, the valves of which, very thick and resistant, are very frequently cartilaginous and osseous in certain portions of their extent.

In the cases quoted above, and the remarks offered, no reference has been made to those pathological states of the ovaria, in which bones and teeth have been found in these organs. Such instances are entirely different from those which form the subject of this communication, as they originate from causes of a totally dissimilar nature. Such bones and teeth, when found in the ovaria, owe their origin, either to an extra uterine conception, or to a conception by inclusion,—one germ being included within another, the one including only, coming to perfection.

As regards the influence exercised by the tumor, in the above case, upon the surrounding organs, and the system generally, it is not easy to offer any very satisfactory explanation. Whether the convulsions to which the individual was liable, were owing to the encroachment of the diseased mass upon the abdominal aorta, and the consequent determination of an increased quantity of blood to the head, or to pressure upon the abdominal nerves, cannot be satisfactorily determined. Be this as it may, it is not easy to conceive, how a tumor of such great



size, and immense weight, could be carried for so long a time, without giving rise to greater disturbance of the functions of the organs exposed to its influence, than was manifested during the life of the individual. Had its nature been ascertained during the early period of its growth, it might have been extirpated with considerable prospect of success. But after it had attained its full developement, and become extensively attached to the intestines, and surrounding part, any attempt to remove it by an operation, could scarcely have failed to destroy the life of the patient. Its perfect freedom from attachment throughout the whole extent of its posterior surface, would, however, have rendered extirpation less difficult than it would be when the tumor is adherent by the whole of its circumference.

*Charleston, May 7th, 1838.*

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ARTICLE II.

*An Address delivered before the Medical Society, of Abbeville District, S. C. at their Second Anniversary, in May, 1837. By Dr. JOHN P. BARRATT.*

*Mr. President, and Gentleman of the Abbeville Medical and Philosophical Society*—At your call, I stand before you to address you, on this, the second anniversary of your existence as an associated body:

Two years are now gone, since you formed yourselves into a society, and now is the time for the interrogatory: what have you done individually, or as a body, for the advancement of science, the improvement of your profession, or the benefit of your fellow man?

Have facts accumulated from your united efforts, or individual observation; have you interrogated the arcana of nature, traced visible effects to their hidden causes? If these are and have been your pursuits, then are you pursuing the legitimate objects of your association. The field for exploration is immense; a vast terra incognita lies before you; there is no barrenness; every inch of matter teems with objects worthy of your attention. The inorganic and organic world woo you to examine the design and harmony that exist through the whole of the Great Creator's works; the same Almighty plan developes, in every atom of

inorganic, and in every fibre of organic being that presents itself to our senses and intelligence.

If each individual member of your society contributes the thoughts, feelings and results of what has fallen under his own observation, a mass of intelligence will be brought to one centre—the whole will be instructed, and good will clearly be the result of united minds, which have been variously employed in the great school of Nature, each bringing into the common treasury, the stores he has gathered.

From the vast improvements of the present age, in morals, in physics and organic philosophy, the profession of medicine is now becoming a science, depending upon physical and organic philosophy for its base. So broad are its pretensions, that the whole *regna natura* must be brought within the circle of its legitimate pursuits. The blind routinist and empirical follower of other men's theories, unsupported by facts, must fall into shade. The sun of truth, with beams effulgent, bursts through the accumulated clouds of superstitious darkness and ignorance, dispels from the fair face of nature the fogs and vapours by which she has been enveloped as with the mantle of Egyptian darkness.

The profession of medicine must be no longer a trade, but a noble science, guided by principles, founded on facts, widely expanded, elevated, pure, with universal benevolence for its day star, and truth, the great anchor of the whole; then will its practice yield that which money cannot purchase—a calm of the soul, a consciousness of having done right, none of the torturing misgivings arising from the doubts consequent upon ignorance. From these the intelligent and benevolent practitioner will be free, and the bed side of the patient will be peace.

From the earliest ages to the present time, there have been, and now are, in all professions, heads, and in our profession, a great many, and each one (with a pride legitimate when guided by correct principles,) has promulgated to the world some favorite theory. Grasping a few facts, and then generalizing the whole to fit conveniently; the effect of diseased actions in organized beings, called fever, has been, and now is, a rich source of theoretical speculations; volume on volume has been written to establish the favorite theory of each leader in medicine. With a systematic nicety, symptoms have been grouped together, and the learn-

ed nosologists have presented us with genera and species, arranged into regular order: thus a long black catalogue is presented to the world, of the illis of man. Quackery is being now, and has been encouraged in all ages of the world, but more particularly at present in our own country, regularly organized; and is in some of the states sanctioned by legislation, a system (as it is called by its promulgators,) of practice of high pressure in all its bearings. The delusion spread far and wide, prevailing in a greater or less degree, in almost every section of our country, and finding supporters in every grade of society. But this, as others, not having truth for its foundation, and facts for its superstruction, will crumble into its primeval nothingness, and leave not a trace behind. On a glance at the history of all ages of the world, the acquisitiveness of man, destitute of moral influences in the general, has caused him to fatten on the gullibility of the world, but these are but the fingi of a day, of rapid growth, but soon to die.

Let us now look at our history as a profession. From the writings of Herodotus, we learn that when an individual became diseased, the friends placed the patient at the corner of the street, or on the side of the road, to attract the sympathies and attention of the passers by, in the hope that some one might happily come, who had been similarly diseased, and had got well, and who would thus be able to prescribe remedies from experience, by which means cures were frequently made. These practices prevailed in Italy, Spain, &c. &c. The priests, for a long time, were in possession of all the medical knowledge of the world. The certain and natural influence of being a venerating being, caused men, when laboring under disease, from which they knew of no retreat, to fly to the temple of their Gods, and invoke their aid. From these daily exhibitions of suffering humanity, the sympathies of the priests were excited, and an attempt made to relieve. Care brought about a great many cures, and it is likely the priests were the most intelligent and benevolent, and hence with them originated the profession of medicine as a part of the priestly office.

Alchemy, physics, mechanics, metaphysics, and chemistry, have each one had the ascendancy. The Greeks, with a Job like patience, carefully watched their patients, and noted down



with precision every symptom of suffering and expiring nature. They made nice distinctions as symptomatologists—but in this their skill consisted. Effects they saw, but never thought or dared to interpose a single remedy to arrest the progress of death, nor did they once glance at the causes producing those groups of symptoms so carefully treasured up. When the last vital throb was over, and the icy hand of death had seized its victim, their enquiries were at an end. Of what advantage was all they had done? Let the millions of trophies of untimely death answer. How humiliating to the philanthropist, and how degrading to the profession.

A new era in our profession has commenced. By the lights emanating from tracing effect to cause, the modern physician, skilled in the physiology of organized being, is now able, in many instances, to hold the fell destroyer, death, in abeyance. It is now that prejudice has to succumb to the active desires of the medical philosopher, the still chambers of death are lighted up, the remains of the pale animate lords of creation are interrogated, the hidden causes of his death, are laid open to the senses. Answers are obtained, and though answered in silence, are answered in truth.

Here the knife of a BECLARD discloses the changeful effects of diseased actions, and triumphantly displays the secrets of fever. The organs that once suffered are bared to the scientific eye of the general anatomist. It is here the relations of organic life are to be traced, examined, studied; the texture and condition in health and disease strictly and clearly compared; it is here that most of the learned and studied theories of fever as an entity, crumble into atoms. Facts as stubborn as true, are here presented, and he whose soul delights in truth, grasps, with avidity, the facts presented by the examination of the diseased organs. A BICHAT, a BECLARD, a BROUSSAIS, have been given to the world; ignorance and error are now trembling, tottering, falling! Truth, eternal in its origin, and so in duration, bursts through every cranny of intelligent being, passing from land to land. The flimsey theories and unphilosophical writings of many from the time of HIPPOCRATES, to the present, are now being exploded and consigned to the depository of the antiquary.

Nature, and nature only, is the book in which to look for tru-

isms. Every page we turn in that vast volume, developes facts firm as the pillars of Heaven. Nature's laws or rules of action, are immutable and without exceptions, and will so remain till the Almighty Author of all, shall issue from the throne of his glory, a return to chaos or the mandate of change.

The relation that exists between the physician and those whom professional services bring frequently together, makes it a legitimate duty, and clearly within his province to point out, and show to man, his physical constitution, the laws of organic life, together with the rules of hygiene best calculated to prevent infringements of his organs. Your duty is constant, active, and vigilant. You are the guardians of health and life; your discriminating intelligence is the ægis that surrounds the lives of your fellow beings. To those with whom debauchery and every other deviation from the path of moral rectitude, has made breaches of the organic constitution, you must administer them, and show how best to restore the harmony of their organs; and thus smooth the path of human suffering, and light up on the diseased and darkened brow of your kindred man, the glow of health and pleasure. Your duties bring in a rich harvest, not alone of the "trash," but that eternal balm of the soul, a consciousness of having done good, by doing your duty. You thus become the true benefactors of your race, and will receive your rewards here and hereafter.

Were every human and intelligent being, truly and clearly to understand the laws by which he is governed, physically, organically and morally, and act in full accordance with the constitution of his *nature*, a thousand diseases that now sweep through the land as with the besom of destruction, consigning to untimely graves, millions of victims, would cease to have names, and organic man would live till he died, though an apparent contradictory expression, for few do so, but either kill themselves, or are killed by ignorance and quackery.

The influence of anatomical research on medical science in pointing to a correct pathology has already extensively been felt. Physical exploration points out clearly the changes and lesions in diseased organs, without these aids, we grope in the dark, launch into an unknown ocean without chart or compass, or play a child's game of shooting in the bush, bird or no bird. To

BICHAT the medical philosopher and the world owe much. It was BICHAT who laid the foundation of true medical science, new to the world, but of immense importance. By the efforts of this individual, intelligence and impulse was given to the world of thought in our profession, and a train of earnest investigations into the vital forces and the various modifications of action in the organs of man. BICHAT took the hint from PINEL, for PINEL spoke of the possibility of a peculiarity of structure producing a peculiarity of action of life and sensibility. But to BICHAT of right, belongs the science of organization in general.

A knowledge of general anatomy applied to a pathological state, uproots all our notions of specifics in medicine. Diseases as entities are no longer tenable, on exploring the diseased organs, and comprehending the relations existing through the whole series. The true cause of all the symptoms we may have noted, and to which we have given names, are clearly developed. Truth now sheds a ray of light, and we regard medicines as modifying agents only, and these have a value in a ratio to their capacity for producing changes in the actions of the system, specially and generally.

BROUSSAIS, with that daring that conscious greatness gives to its possessor, concentrated and arranged into system, and by the strength of his genius, gave a most powerful impulse to medical science. Organic sympathies and the sympathies of relation, are by the labours of this great man, being now better understood. The lights of philosophic truth bursts through the accumulated mists of ages, and sheds its genial influence on our too long and too much benighted profession.

A true medical philosophy is now lighting up the darkened chambers of intellect; a knowledge of organic man in health and disease, is progressing onward; arts and sciences are progressive, from the rudest notions of the savage in the construction of his hut and instruments of war and the chase, to the refinements of the civilized world.

However humiliating to our pride, it is true we are yet but half *civilized*; do we startle to hear ourselves called semi-savages? let us for a moment examine the position, see what has been and what still is our state. Delusions have been promulgated in a continued series, ruled man's intellect, aroused his



passions, and brought millions of our species into collision and deadly combat, to support the ambition of tyrants aspiring for empire: the blood of our species has flowed in profusion o'er every land in their barbarious conflicts: millions on millions of money has been expended either for defence or aggression by the natives of the earth. The savage propensities of our nature cause man to spill the blood of his fellow man; the knife or the deadly ball, settle what intellect ought to do. Man has battled to sustain dogmas that are now crumbled into dust and covered by the fallen fragments of successive follies. From whence say ye come the secret arms now being carried in our own times? 'Tis the foul dregs of savagism that buckle on the murderous *Bowie Knife*, or arm the walking cane with the deceitful spear, and causes the glittering dirk to lurk in the bosom where honest indignation ought to spurn such a contact, and exulting in the pride of intellect, dash from him the insignia of *barbarism*. There is a fault somewhere. An error in education, a neglect of the social law of our nature, the propensities, lawless, rule where the intellect ought to be enthroned; the individual is not taught to rely on his own thoughts and feelings. A few daring individuals have governed the whole mass; the individuality of the species is lost, and the many have become but the component parts of the few.

The history of Rome gives you an example in her Cæsar. Bonaparte is another example of our times, as witness the *Vive le Emperor* shouted by the millions of France when he escaped from the water bounded prison of Elba to deluge her land in blood, and dissolve every tie of nature in death, causing thousands of matrons to mourn the loss of their children. This state of things has to be broken, though slowly, as every inch onward presents a shackle of antiquated obscurities, rendered sacred by age, ignorance or prejudice, which education and the cultivation of our better feelings, must and will break down. Our race is on the high road to improvement, each successive age makes nearer approaches to a better statè; the twilight of morning is brightening to the light of day, and as time rolls on, man will be developed as a civilized, intelligent being.

About the year 1790-95 the immortal GALL began to develop the physiology of the brain, new lights sprung up all around,

and man began to investigate and study the sources of his own thoughts and feelings.

GALL in this matter stands alone and original in bold relief from all the world. It was GALL who dared to say to the physiologist, that thought was dependant on material organs, that on the integrity of the brain depended the integrity of thought.

Since GALL first promulgated to the world his observations on those delicate tissues, the nerves, which till then were measurably in the arcana of nature, have received great attention from the most intelligent anatomists and physiologists of the present age. From such investigations much light has been thrown on the matter, and much valuable information has, from such a union of effort of the master spirits of our profession, come in upon us from different quarters of the world.

BROUSSAIS has pointed out the causes of diseased actions, and wiped out from the pages of medical science, diseases as entities, distinct from organic derangements. And for this he has been assailed, abused, traduced. But by whom? Not surely, by those who have carefully investigated his writings, or entered into his thoughts. No gentlemen, to read and understand, is to believe the principles for the most part which he has laid down.

Those who are loudest in the abuse of BROUSSAIS, are for the most part, men who are naturally destitute of those powers of thought which so eminently characterized this modern prodigy of medical philosophy. Many of his abusers have never read a single page of his writings, but have abused from the bare say so of, they don't know who. To all such I would say, read, think, play the man,—and then; in the place of being the abusers, you will become the admirers of him who said, “to think is to feel, sensibility is the soul of man.”

GALL and SPURZHEIM in developing the physiology of the mind, have been represented to the world by their opponents, as “German fanciers, fools, &c.” but truth prevailed, and though “passed through the volley and shadow of death,” they live on the pages of their country's glory, and will live till the order of man's organization shall be changed by the *Manus Dei* being stretched forth to arrest the present order of things.

In our own country a GODMAN has lived—his country's glory deeply imbued with the philosophy of the age—and pursuing a

course of investigations in the great school of nature, with a vigor of intellect scarcely every excelled and but seldom equalled. The flame of vitality that lighted up his brain to exalted thought, burned with splendor. But alas!!! for science and the world, the grim tyrant death marked him as an early victim—the thread of life too tensely drawn was snapped asunder. The monster grasped him in his icy arms, and bore him in the morning of life to the cold damp chambers of the grave. Philosophy mourns her votary, science weeps her lover, and the world has lost a benefactor. A DUNGLISSEAN still lives to adorn a seat in the scientific halls of our country's greatness. One of our sons now fills a conspicuous place in one of the schools of medicine, and we have the pleasure to hear of his returning to his native state, to give increased tone and vigor to her institutions.

The University of Pennsylvania has her JACKSON, the author of the principles of medicine; he has added much to the development and improvement of medical science, and bids fair to rival the most eminent in the old world.

Let us for a moment glance at the practice of a medical man, educated in the school of nature, taught to look on man as an organized being, and who understands the organic relations existing between each separate organ. To him it is matter of fact and not of mere speculation, that peculiarities of texture, wherever found, are assuredly governed by the same laws, and possessed of the same susceptibilities; and when in a diseased state or condition, show clearly, similar phenomena. He is one who has discarded fever as an entity, but looks upon it as a sanative radiation to relieve the suffering organ. The functions of digestion, circulation and nutrition, are what he who has been taught the physiology of the organism of man, will endeavor to influence with remedial agents. The physician is called (for example,) to a case generally called billious fever. On exploration and analysis, he finds the patient in the following situation: The tongue somewhat pointed, red or scarlet on its edges, and covered with a dirty yellow coat on its median portion. Pulse strongly developed and frequent. Skin burning hot, comparatively speaking, intense thirst and a strong desire for cold water, and acidulated drinks, respiration hurried, with a yellow color of all the mucous tissues.



Thirst is a certain sequence of exalted actions in the stomach or other organs, when the whole organism responds to the suffering portion of the catenated whole. In most patients, we witness an instinctive call for those drinks that are acid in their character.

To sum up the result of his observations, from physical observation and analysis, he unhesitatingly comes to the following legitimate conclusion of the case—the land marks in his chart are all marked and numbered, and he reasons thus: Here is before me a primary and certain affection of a mucous texture, inflammation and irritation to a certain extent, and through the nerves of the ganglionic system, extending and influencing the brain, heart, lungs, spleen, liver, &c. &c. the original irritation is in the stomach—the symptoms are sequences only.

Now we come to the point of application of principles to practice. Bearing in mind the fact “ubi stimulus, ibi fluxus,” the line of practice is now plain. Cups or leeches are applied over the suffering organ or organs, and blood is thus abstracted. Cold mucilaginous poultices over the parts affected. The blood vessels over the stomach are supplied or receive nervous influence from branches of nerves immediately connected with those branches that supply the texture of the stomach. By thus abstracting the blood as above, almost direct completion of the organ is obtained. To save or prevent any further irritation, nutrition is modified by the use of the mildest and best stimulating articles of diet. All stimulus will be positively withheld from the gastro pulmonary mucous texture. Centres of irritation will be established on the extremities of textures, the same in character as those primarily effected. And if necessary centres of flusion are established in texture at a distance from the suffering organ, cold drinks, lemonade, orangeade, mucilage, sugared water, &c. &c. If the brain becomes engaged, blood is taken from the temples or the base of the brain, emolent enemata—the tongue loses its fire and clears—respiration slower—the skin becomes clear and cool, circulation returns to its normal state, and health is restored without the routinists ordeal of emetics, purges, salivations, death, or what is worse than death, a chronic state that renders life but a miserable reality.

## PART II.

## REVIEWS AND EXTRACTS.

*Dr. Jackson's Clinical Lecture on Epilepsy.*

SATURDAY, 10TH FEBRUARY. Dr. Jackson commenced: Epilepsy, gentlemen, is one of the most formidable affections, which you will be called upon to treat; and you will find few, in which all the resources of your art will so frequently fail. It has been looked upon in this light, from the earliest period. The ancients had so little control over it, that they designated it by a term signifying the malice of the demon. Hippocrates continued the title *morbus sacer*, or the sacred disease, though he combated the superstitions from which it was derived. Various other terms have been applied to it. By the Romans, it was called *morbus comitialis*, from the fact that its victims were often struck down with it in the forum, probably owing to the excitement arising out of public discussions, and political warmth.

Many illustrious and eminent characters of ancient and modern times have been subject to this infirmity. Julius Cæsar\* was an epileptic sufferer: it is very certain, therefore, that it is a disease, which does not necessarily interfere with a high development and exercise of the intellectual faculties. On the contrary, this very exercise of them is often productive of the disease. Perhaps the most distinguished pulpit orator this country has produced, Buckminster, fell a victim to repeated attacks of this affection, brought on by intense mental application. On the other hand, fatuity is not an unfrequent attendant upon epilepsy, as you will have occasion to notice, in numerous specimens of the disease, that will shortly be presented to you.

Epilepsy is vulgarly called the falling sickness, from the circumstance of the patient's falling suddenly to the ground, upon an attack of it. From this cause, they are liable to numerous

\* *Cæsar*. He fell down in the market place, and foamed at the mouth, and was speechless.

*Brutus*. 'Tis very like: he hath the falling sickness.

*Julius Cæsar*. Act 1st, scene 3d.

accidents; in several in this house, that will be brought before you, you will see traces of the effects of fire, and other injuries.

Epilepsy is a convulsive affection, attended with loss of consciousness. This latter feature I am anxious to impress particularly upon your attention, as it is not considered by some writers, among them Vogel, Sauvages, and even Cullen, as essentially characteristic of the disorder. For my part, I never saw a case, certainly never in this house, in which it was wanting. The symptoms of epilepsy then I consider to be, convulsive movements, with loss of consciousness and of the intellectual faculties. As the loss of the powers of motion in palsy depends upon pressure acting upon the thalamus and corpus striatum, so I think we have evidence from the convulsions of epilepsy, combined with loss of consciousness, that in it, the cerebral structure must be involved. But the convulsions I do not look upon as the most important symptom; that I consider to be the loss of the intellectual faculties—the muscular symptoms being the first to pass off, and frequently very slight. In some cases, the muscular convulsions and loss of the faculties are followed by complete coma. The suspension of the intellectual faculties, and the convulsive movements are evidently the effects of sudden and violent disorder in the cerebral circulation. There is, it appears to me, a raptus of the capillary circulation, terminating in a congestion, more or less intense, of the brain. This is usually well marked, the face swelling up, and becoming turgid, and almost purple, affording striking evidence of determination of blood to the head. Occasionally, so forcible is this raptus, that ecchymosis occurs from the effusion of blood out of its vessels. This fact, it strikes me, is strong evidence, that the movement is attended with force, is one of activity, and that the accumulation of blood, as has been conjectured, is passive and secondary. I had an illustration of this fact, in the case of a gentleman, who was under my care some years ago, in whom the disease suddenly showed itself. Attention was first called to him, by his family being struck with the appearance of petechiæ, or livid spots upon his face. A doctor was sent for, who pronounced it a mere affection of the skin, which would disappear spontaneously, as in fact it did; but, in a week or two, it came back again; and this continued to be repeated for some months, without a suspicion of its cause, or of the true nature of the disease. A young man, for some accidental reason, happened to sleep in the same bed with him, and was awakened in the night, from his agitation in a convulsion. It was then ascertained, that the periodical appearance of spots on the face proceeded from attacks of epilepsy in the night, of which the patient was unconscious.

The patient, in this affection, is totally unconscious of the existence of an attack. He rouses up gradually from a state of



profound somnolency, with an expression of astonishment upon his countenance, with simply an unusual feeling of soreness, from the great muscular exertion which he has undergone. This, to an epileptic, is the principal indication that he has had an attack.

The attack varies in character. Sometimes the patient falls suddenly down, without any previous admonition. At other times, he is able to anticipate the approach of the complaint. Most frequently it is preceded by an uncomfortable sensation about the head, as vertigo, dimness of sight, &c. Again, the warning may take place in the abdominal viscera, which is ordinarily indicated by a sensation about the region of the stomach, gradually moving upwards to the head. Often, however, the patient has no consciousness of his approaching fate; he suddenly cries out and falls prostrate to the ground.

The symptoms of an attack are not always of this extreme intensity. Sometimes they are so mild that you can hardly call them epilepsy, though I think they still belong to this class of affections. They are often exceedingly local in their character. A gentleman of the medical class, some years ago, was affected in this manner. He had been recommended to study medicine, as a mode of getting rid of the disorder, which, by the way, was a very ill-judged recommendation. He would at times in conversation, suddenly repeat over some unconnected words, or an oath, or he would sing a little, being all the while in a state of total unconsciousness of what he was doing, and then resume the thread of his discourse, ignorant, unless informed of it, that any thing had occurred.

The disease was limited to the production of the above symptoms, except on one occasion, when he imprudently fatigued himself with exertion, and ate a large quantity of nuts, (a quart.) he then had a complete epileptic convulsion. This accident indicated the true character of the disease.

Another case in which the disease showed itself in this slight local form, was that of a gentleman, who had a daughter also labouring under the disease of a most strongly marked character. I have often seen this gentleman stop, while in conversation, and repeat his words; sometimes he would merely move his lips without articulating, and then resume his discourse, without being conscious of what had happened.

I have met with one case that appeared to me, if it may be so called, epilepsy affecting the spinal marrow. The general character of the symptoms evidently connect it with epilepsy. This case was that of a boy, seven or eight years of age, who laboured under monthly attacks, of a form which I shall presently describe, brought on by an obstinate intermittent fever, when an infant. Epilepsy supervened, and had continued.

These attacks were also of an intermittent character; indeed, I might here mention that the disease always takes on a type more or less intermittent.

The paroxysms would continue to recur for three days, and often amounted to twenty or thirty, in the twenty-four hours. At the end of three days they disappeared, until the expiration of a month, when they would be again renewed. In all other respects his health was perfect. He was seized every month, without any loss of consciousness, however, with spasms, affecting all the muscles of the trunk and extremities, proceeding of course from an affection of the spinal marrow. It was a case of cramps, more than convulsions. They were attended, as all cramps are, with violent pains.

This boy is now fourteen years of age, and with the appearance of puberty, the affection is disappearing. I cannot well rank this affection any where in a system of pathology. It is not epilepsy, because the brain is not affected, nor can it be called tetanus. I think I may perhaps with propriety, designate it epilepsy of the spinal marrow.

After this general outline of the symptoms and character of the disease, I will now introduce to your notice some cases of patients who are labouring under it. I will only add previously, that the most common period for it to show itself is childhood, and that it is more apt to attack the female than the male sex.

This girl is twenty-two years of age, and enjoys general good health. You notice the vacant expression of her countenance. There is idiotism combined with epilepsy: this is not unfrequent. She menstruates irregularly; the menstrual function was not established, till three years since; the secretion is now scanty, but the discharge occurs more or less every month. Epileptic fits first appeared seven years ago, when she was fifteen years of age; up to that time, she had been quite well. At first, they were periodical, recurring every three weeks; subsequently, after the menstrual evacuation was established, they became more and more frequent. At present, epileptic paroxysms precede and accompany the menstrual period. The patient is sensible of the approach of the fits, by the sensation of a bright light before the left eye which precedes the attack; during the attack, she is insensible. All the functions are performed with regularity except the menstrual. The girl has never received any external injury. You learn that she has a premonition of the approach of an attack. This is often the case. The patient usually feels a rising up from the epigastrium to the head, like a flame, termed the *aura epileptica*. When it has reached the head, consciousness is gone. This girl tells me that her attacks correspond with changes of the moon. It has been a favourite theory with many writers, that lunar influence is felt by individuals,

suffering under this and other affections. Balfour has written a work in favour of this hypothesis. I however have no sort of belief in any connection between epilepsy, and changes of the moon. In this case, from the intermittent character of the affection, it occurring every three or four weeks, the attacks must correspond in many cases, with some one of the four quarters of the moon.

In this case, the appetite is normal. It is sometimes exceedingly voracious, and cases of this sort I never could cure: I believe them to be totally incurable. A regulation of the diet is a most important element, in the successful treatment of epilepsy; and, as this morbid appetite prevents any control over the diet, a cure is hopeless.

The memory in this girl is impaired. I have gathered however from her that she has dysmenorrhœa, and menstruates with pain. I speak thus freely before her, as the faculties of her mind are impaired. Delicacy on this subject to the sex, gentlemen, should never be out of mind. The uterus then, in this case, I consider the seat of the disease, the point from which morbid action is reflected to the brain. Nutrition is, you see, not affected by the disease: this girl's flesh is firm, and her digestive powers appear to be in excellent condition. The cerebrospinal system may be affected, without impairing the constitution; and you see how the life of nutrition is independant of the brain itself.

Here is another case, an old inmate of this house, a girl aged 26, of very obtuse intelligence; although you see she recollects my face and name. Notwithstanding this great pallor of countenance, which you notice, she enjoys pretty good general health. She menstruates regularly though with some slight pain. The first fit of the disease occurred at the age of eighteen. She was attacked suddenly whilst engaged at her ordinary occupation, and does not recollect that she had any pain in the head or unpleasant feelings about that time: she says that she understands that she had not. At first the fits occurred almost daily. Her attacks now are usually preceded at night by fulness of the head, and a state of insensibility, attended by a blackened turgid face, but without convulsive movements: these are succeeded the next morning by regular fits of epilepsy, to the number of fifteen, during the twenty-four hours. Now these previous nightly premonitory attacks were called fainting-fits, but they are quite the contrary. Fainting takes place from want of action in the heart; the blood does *not* get to the brain, and you have feeble pulse and respiration and *pallid face*. Whereas, here, you have evident determination of blood to the head, full pulse, and quick respiration.

This third case presents an example of the voracious appetite of which I spoke. She is twenty years of age, and has been



subject to the disease from the age of five. Her mental imbecility is very great. Menstruation regular. The paroxysms are of daily occurrence; during them, her face becomes exceedingly flushed, and she froths at the mouth. Some time ago, she says, she felt queer when the fit was coming on, but she has now no admonition of its approach.

Here is another case, in which the disease is of seventeen years standing, and showed itself first when the woman was between sixteen and seventeen years of age. It has proved very intractable, every description of treatment having failed to make an impression upon it. The intelligence, however, as you perceive remains very perfect. The paroxysms are preceded by dysmenorrhea, which gives the affection an uterine type.

Here is a case, the general character of which does not differ from the others, which have been under your notice, except that the disease first appeared after an attack of scarlatina, in which the head was much affected. The girl is sixteen years of age, and has never menstruated. You see the total imbecility of her mind; her memory is gone. The nurse tells us, that the attack of scarlatina occurred five years since, and that her mind was perfect before. The paroxysms of epilepsy are now becoming more frequent, occurring almost daily. They come on now at night, although formerly she had them in the day time. When on the history of the disease, I should have mentioned, that many individuals have the fits only at night, and never during the day, the only manifestation of the occurrence of the attack, being a soreness in the muscles next morning.

You have next before you a man, aged forty-seven years, in whom the disease has existed for thirteen years, caused by a blow on the head from the fall of a tree. Several pieces of bone were taken out at the time, and the wound had nearly healed, when he had the first paroxysm of epilepsy, about three months after the injury. At first the paroxysms were very severe: he thinks they now grow lighter. They were more severe when he was in the habit of taking his dram. He says that they are now brought on by his "taking cold," and that he never has them when his health is perfectly regular. You see then that the disease is clearly here under the influence of exciting causes. The last paroxysm the man had was about three months ago. His memory is much impaired, as to events which have transpired since the injury; but he can recollect well whatever took place before.

I have met with many such cases as this, in which the memory totally failed in events subsequent to the appearance of the disease, although it retained perfectly facts antecedent to this epoch. I had some years ago a boy from Virginia under my care, a strong, vigorous lad, in whom epilepsy had been brought on

from excessive mental application. He was a very ambitious little fellow, always striving to be at the head of his class, and his tutor, instead of repressing, injudiciously urged on his efforts. His recollection of things that had happened previous to his attack was perfect, and of all that he had learned, but he was incapable of acquiring or retaining an idea subsequently. I took him home to live with me, and I was never able to communicate to him a new idea. I could not even make him understand that the Virginia penny and our cent were the same coin.

I perceive that the man, of whom we were just now speaking, has a depression of the bones of his skull of a quarter of an inch. This may be the local cause of the affection. I may add, as regards this, that the man knows when an attack is coming on, by the appearance of a black spot before his right eye, three or four minutes before he falls. He always lies down, when he finds the fit coming on, and it is never so sudden as to prevent this.

I present to you another man, aged twenty-seven, in whom the disease has existed say for ten years. It was brought about by excessive intemperance. Here then you perceive another existing cause of the disease. You observe that in this man, the muscular movement is affected. This is by no means necessarily the case. All the others you saw walked well. On the contrary, I have generally seen considerable muscular development and muscular power in epileptic patients.

Here is a case complicated with mania, the general health being otherwise excellent, another illustration how little the functions of nutrition are affected in the diseases of the cerebral organs. I have here another case complicated with mania, in which the disease has existed for three years. The patient was scalded in a steamboat just before the epilepsy appeared: this may probably have had some connection with the production of it.

In this boy, whom I now show you, the paroxysm often manifests itself with simple loss of muscular power. The boy, I am told, will fall without any accompanying loss of consciousness. In some cases, there is merely a slight vertiginous movement, the patient not losing his consciousness and instantly recovering: the paroxysm is not then complete. It is a case of incomplete epilepsy.

The train of cases, which I have exhibited to you, affords a melancholy proof of the inefficiency of all the resources of art and science. Epilepsy appears to have the same incorrigible character now, as at the earliest periods.

These cases have shown a succession of exciting causes of the disease. I shall not however divide it into different species, according to the local origin that makes an impression on the brain.

The essential character of the disease I hold to be a highly irritable erythematic state of the brain, which if you strike away, you have various local affections, but no longer epilepsy. By analysing the several distinct movements, which take place in the animal economy, in the affection, I think we may find a rational pathology of the disease and system of treatment. The treatment of epilepsy, as generally directed, is empirical. There is no one remedy upon which we can rely, but we must adapt our therapeutics to the features of the case. These may be as various as the causes of the disease.

By analysis, then, I think we will find three perfectly distinct features in epilepsy. The first is an irritable state of the cerebral structure—possibly an erythematic condition of the brain. This condition of the brain proceeds from various causes. It may be occasioned by some local affection of a painful or irritative character, with which the brain is ultimately brought into sympathy, or, it may be induced by a variety of exciting causes, such as excess of venereal indulgence, masturbation, exostosis of the cranium, spicula of bone or tumours upon the arachnoid. You readily see, how these latter must keep up a constant state of irritation within the cranium. The race of Indians, who flatten the head by artificial means, and force in the bone upon the brain, are said to be epileptic. Cases of exostosis, spicula, and depression of the bone are difficult of management, though I will not say they are utterly intractable. Professor Dudley recommends the trephine, in such instances, and he has been remarkably successful, in relieving some cases by this operation. Winter before last, Professor Gibson performed an operation of this sort, in this hospital, in a case, where depression existed, caused by an accident, but without beneficial result. This case appeared to me to promise a favorable opportunity for testing the influence of this proceeding: it did not even suspend the paroxysm.

The next element, which I consider a component of the disease, is, the extreme mobility of the capillary circulation, and the facility with which its regular distribution is deranged. If you prevent this, you prevent the formation of the paroxysm. The essential feature of the disease is, a sudden congestion of blood on the brain, apparently produced by a raptus or rush on that organ. The symptoms that result are dependant upon the intensity of this raptus. In some cases, it is so violent, that petechial effusion of blood in the skin of the face occurs; and the attack varies from a slight loss of consciousness, and a light convulsion, succeeded by a transient sleep, to prolonged and profound coma, that will last for two or three hours.

The next and last element is, the existence of some permanent local affection, which acts as a thorn in the flesh, or point of



irritation, worrying the nervous system into excitement, and producing an irritable or erythematic state of the brain. This may be, as you saw in many of the cases to-day before you, dysmenorrhea, or other uterine disease. When on the subject of neuralgia, I told you, that these might act as excitants of that disease.

Another local cause of epilepsy is intestinal irritation. The existence of worms has frequently been the exciting cause. Your remedies then are anthelmintics: you purge with turpentine or something of the kind, and cure the patient. Derangement of the stomach may also act as a local cause of irritation upon the brain. Ordinary convulsions are, you know, often produced by the functions of digestion being impaired: this sort of reflex action may take place through the medium either of the ganglionic system, or of the eighth pair of nerves. I could recall several instances of fatal convulsions from the action of indigestible food. Such a one occurred in my practice, in the case of a young child, two years of age, from a large quantity of fried eggs. It was destroyed in four days. You perceive here, that a simple article of food may produce convulsions, a violent congestion, or other disorder of the brain, from a cause that can act only on the stomach. You can understand, then, how a morbid state of the stomach, reflected upon the brain, may produce a state, productive of epileptic paroxysms. The congestive raptus, the immediate cause of the convulsion and unconsciousness takes place by a sort of *appel*, if I may use the word, upon the grand capillary circulation, which is the means of the circulatory communication between the organ locally affected and the brain.

These then, gentlemen, are my views of the pathology of epilepsy. I do not look upon it as a single disease, in which there is but one element, but as consisting of several combined elements: first, as erythematic irritability of the brain, secondly, a morbid mobility, through the action of the nervous system, of the capillary circulation by which its equal distribution is easily disturbed; and thirdly, a local affection, a point of irritation in some distant organ, which, by a reflex action upon the brain, excites and keeps up the disease. If these views are correct,—and, if you analyse the phenomena of the disease with care, I think you will find it resolves itself into the elements I have enumerated, we have at once a national plan of treatment, based upon the different component parts of the affection. For each element, we must have a different mode of treatment. Our efforts must be directed in the first place, to get rid of the erythematic or irritable state of the brain, secondly to give tone to the capillary system, and, thirdly, to remove the local cause of the disease.

The first thing to be done is, to place your patient upon the lightest possible diet, so as to have the stomach completely under your control. Of course alcoholic liquors, tea, coffee, and the

stimulants generally are to be utterly prohibited. As a general rule, the food is to be exclusively vegetable. I have never known a case to recover, when animal food was continued. We then direct our treatment to the brain. I commence by having the hair cut short, and by a course of chronic leeching. One day I apply a leech to one ear, then another to the temple, a third day behind the other ear, and so on. This I keep up for months: in fact, you must prepare your patient for a long period of probation, holding out no prospect of relief, before one or two years have elapsed. Cold water is to be applied to the head, two or three times every day, with at the same time, warm or stimulating foot-baths. When the patient is asleep, keep warm bricks or warm water constantly to the feet. He is besides to sleep upon a hard pillow, without a night-cap, upon a mattress and not a feather-bed. All this is to keep down cerebral excitement and prevent the flow of blood to the head. Setons at the back of the neck, or an issue on the arm, as a diverticulum, are useful. Your next object is, to give security to the capillary system. For this purpose, you must employ tonics, of which the best for your purpose are the mineral tonics. I prefer the preparations of zinc. Begin with a quarter of a grain of the sulphate of zinc and one grain of the oxide, two or three times a day, and gradually increase the sulphate to one grain. Emetics have been recommended and tartar emetic has been employed, just before the paroxysm is about to occur: if you can foresee this, this treatment may be of advantage. But I prefer to vomit with the sulphate of zinc. By persisting with the use of the metallic preparations, the capillary system gradually acquires vigour: through its means, the brain can no longer command and concentrate towards itself the circulation of the entire system. The preparations of iron are also to be employed to effect this end. You may vary them with the zinc, administering the two on alternate days. The phosphate and carbonate of iron are the best preparations. Small doses long continued are to be used. Large doses may disturb the organs. The sulphate of quinine, in small doses, used as a tonic and not as an anti-periodical, in doses of a quarter or half a grain, is likewise useful. It may be combined with the oil of turpentine, in morbid states of the stomach, accompanied with the voracious appetite of which I have spoken. Upon the whole, however, I decidedly prefer the metallic preparations.

You must never permit constipation of the bowels to take place. To obviate this, rhubarb is an excellent remedy. Avoid the drastic purgatives, which irritate the nervous system, and destroy the digestive powers, which of course is not your object. Open the bowels daily with an injection; this acts upon the lower bowels, which have less connection with the brain, than

the upper portion of the intestinal canal. Some of the vegetable tonics as Gentian, Cascarilla, and the tonic anti-spasmodics as Valerian may be commonly resorted to.

The next point in the treatment is to ascertain the seat of the *local affection*. This varies exceedingly. In some instances, I have known a tubercle upon a nerve act as an exciting cause of epilepsy. Again, I have seen it proceed from the point of the finger. Desault cured a case by cutting off the toe. In these cases, a peculiar sensation is felt, commencing at the point of irritation, and ascending apparently along the nerve, until it reaches the brain, when the paroxysm takes place. It has been named *aura epileptica*. When the aura or sensation goes up slowly from the point of origin, the paroxysm may be often arrested, by applying the tourniquet or a light ligature. Cases are on record, where a piece of glass was the excitant; by cutting it out, the disease terminated. A diseased testicle has acted in the same manner, and relief was afforded by extirpating it. Most frequently, however, some internal abdominal or pelvic visceral affection is the local exciting cause of the disease. This is particularly the case with the uterus, in the female. In the majority of the female epileptic patients, whom I have had under my care, the womb was prolapsed, or enlarged, or carcinomatous, or there was dysmenorrhea from simple nervous irritation of the organ. Unfortunately, after you have completely got rid of the uterine affection, epilepsy will sometimes continue, when the disease has been of long duration. The brain and nervous system have become so much disordered by the long continuance of the disease, that numerous light derangements of the functions are capable of exciting the paroxysms.

Cases of uterine complication, I treat with leeches to the neck of the uterus and to the vulva, cups and blisters to the sacrum, hip baths, in short with the class of remedies, adapted for the relief of dysmenorrhea and uterine irritations. There are cases, in which menstruation is unattended with actual pain, there being simply a sensation of uneasiness or of dragging. Tonics are here of service, particularly the chalybeates. But local depletion, after all, is the remedy upon which you are most to rely. I had a case in this house of a very remarkable character illustrating the view of the subject. The patient labored under maniacal paroxysms, connected with uterine derangement. She was the wife of one of the theatrical orchestral corps, who forced her to travel, a week after an accouchement. This brought on first hysteria, and afterwards maniacal excitement with convulsions. These were preceded, as she told me afterwards, by the sensation of a flame of fire rising from the uterus to the brain. The occurrence of the menstrual period aggravated her symptoms. She had been treated, before I saw her, by



bleeding and purgatives. I directed the application of leeches to the vulva, a day or two before the menses were expected. They were applied, and the consequence was a severe menorrhagia. I was suddenly sent for, and found her lying on the floor, almost in a state of syncope from loss of blood. A large chamber vessel was filled with blood, and a considerable quantity on the floor of her cell. The application of cold water, arrested the hemorrhage, and the results were most gratifying.

Since that period, the patient has never had another attack; she is now perfectly well, a fine looking, large, fat, healthy woman as you would wish to meet. This case is a fine illustration of the influence of a local affection in determining convulsive paroxysms, and of the advantage of local depletion in relieving and curing them, when dependent on inflammatory irritation. Along with the preceding treatment, leeches or cups along the vertebral column, with setons or caustic issues, according to particular circumstances, are often to be used as adjuvants. Such, gentlemen, is a systematic plan for the treatment of epilepsy, founded on the rationale of the phenomena of the disease. No doubt it will often fail, and you will feel tempted to resort to empiricism. There is an almost endless variety of empirical remedies, many of which I have tried in the course of my practice, but without beneficial results. I will enumerate some of them, as, when a systematic method fails in the treatment of any disease, we must then resort to a tentative practice or empirical remedies.

Equal parts of mustard seed, ginger, and sage, is a remedy for which great success is claimed. I have heard of one or two reputed cures from its use, but it uniformly failed in my hands. The mustard seed produces daily movements of the bowels, the sage exercises a tonic influence, and the ginger is an agreeable stimulant.

Baron Sloet, of Holland, who has great repute for his success in the treatment of epilepsy, has given the following as his remedy. It consists of one pound of the dictamus albus cretensis, or white fraxinella, and of the pulvis zedoaria  $\mathfrak{zjss}$ . There are two kinds of the dictamus, one Italian and the other Cretan; Sloet says the Italian is of no use. The dose of the mixture is about two scruples, more or less, according to the case. It is given in the water of linden flowers. Four doses, in bad cases, have been given in a day, but the Zedoary is then reduced to one-half. Immense success is claimed for this prescription. I can say nothing of its value, from my own experience, as I have never been able to obtain the dictamus from any of our apothecaries.

The internal use of lunar caustic as a remedy for epilepsy is now pretty nearly abandoned. I have often administered it

here, and never saw it do any good. It is besides exceedingly injurious to the stomach, in the large doses recommended. It is given in doses of from four or five to ten, twenty, and even thirty grains, but I should think it very dangerous in doses of this quantity. I once carried it up to these excessive doses in an old case of epilepsy, in this establishment; shortly afterwards, while I was absent from the city, the patient died, with, it was said, symptoms of inflammation of the stomach, but no post mortem examination was made. There are many fatal cases reported as having occurred in European practice from this cause. I have told you frankly of my own mistake, from a sense of duty; for, in books, you are very seldom warned of the *bad* effects of remedies. Let me then impress it upon you that lunar caustic pushed to high doses, may destroy the mucous membrane of the stomach.

I need not run over any further this list of remedies; I suppose there are at least a thousand of them, and of the most dissimilar characters. I will only add, that, since I have adopted the plan of treating epilepsy, which I have detailed to you, I approach it, if the case be recent, with confidence. The majority of my patients, in private practice, get well; in this house, they are, as you have seen in the history of the patients that were before you, hopeless cases of long standing, which are brought here more for an asylum in their misery, than with any hope of relief.

REMARKS BY THE EDITOR. We are highly gratified in giving place to Dr. JACKSON's, whole lecture on Epilepsy, as containing the most clear and accurate etiology we have seen, of this hitherto too obscure and intractable disease. In the want of sound pathology, Epilepsy has rested for its cure, on gross empiricism and superstition. As Dr. JACKSON correctly observes, there are a thousand reputed remedies, and these might, on the same plans which instituted them, have been extended as far as tricks and guesses could have been made to vary. Amulets, human skull bones, and living toads with many other such nonsensical things have been brought into requisition, and each has had its unmerited praise. If nothing else had, the fact of such a number of remedies, as well as their unreasonableness should have convinced physicians of the fact of their ignorance of true pathology in this case.

The point urged by Dr. JACKSON, and which his cases tend well to illustrate is the primary existence of local irritation and perhaps inflammation, somewhere; it may be almost any where. This is the great secret in this uncontrolled affection. It is a

disease, not necessarily uncontrollable in its nature. It is true that there may be primary or secondary causes of it which are not removable by any known power at command; for worms as a cause of intestinal irritation, or disordered action of the vessels of the brain, or hydrocephalus in consequence of some primary irritation, may not prove amenable to our remedial means; but we venture the assertion, that the greatest portion of the misfortunes resulting from epilepsy has been in consequence of a want of knowledge of the "*local affection*" which was its cause.

Warm bath, sinapisms, &c. whilst they have tended to increase fluxion to the superficial capilleries have done well in acute cases, although the whole rationale of their operation has not been understood, nor the "*local affection*" they were calculated to correct, ascertained.

The nature and location of the primary affection being ascertained, indications become easily fulfilled, so far as our materia medica will supply the means. And here we wish to add to Dr. JACKSON'S remedial resources in this disease, the benefits of our own experience and reasoning on this disease. For nearly twenty years we have been in the use of galvanism in acute and chronic cases of epilepsy, and *generally*, not always, with the most happy results. This remedy is available both for the correction of the primary irritation, and the cerebral excitement. It is also a remedy, susceptible of application as extensively as the variety of cases, or condition may demand; and which is easily conceived, when its *modus agendi* is understood. The manner of operation alluded to, is that of lessening excitement at the positive, and increasing it at the negative pole. This is an established fact of our own frequent experiment and constant observation for twenty years past. Nor do we apprehend that more than one experiment will be needed to convince any observer of the fact, that whilst the former will effect the desiccation of a blister on one part, the latter will produce a tough coagulum of lymph, or a deep gangrenous slough in one on another part. This principle we have successfully applied to the cure of chronic epilepsy which had resisted all other remedies; and we have generally exercised a complete control over perpetual convulsions in children from various causes.

We design to treat this subject more fully at some early day, when opportunity may be afforded.



*On the Physical action of the Capillary System.—Identification of the force producing motion with the Chemical force.*  
By JOHN W. DRAPER, M. D., *Professor of Chemistry and Physiology in Hampden Sidney College, Va.*

It has been alleged, as a bar to all physiological investigation, that the phenomena of life are of so peculiar a nature, that we must necessarily forever remain ignorant of their causes; that, unlike physical phenomena, which are of a simpler caste, and more within the reach of human understanding, there is something in these, inherently mysterious and incomprehensible. This unphilosophical impression exists not only in the minds of the vulgar, but has extended itself to men well trained to scientific research: it is to be found in the writings of the most eminent physicians, and often affords a plausible screen for professional ignorance. Of all the sciences, medicine is the last to profit by the analytic method—a method which has raised other departments of knowledge to their present rank. Its cultivators pursue the same course of synthesis which was pursued in the days of the Greeks—they reason from hypothesis to fact, instead of from fact to hypothesis.

It may, however, be boldly averred, that the science of life is not more occult than any other of the sciences. We may, by proper investigation, carry it as far; and in the pursuit we shall only stop short at the very same point which has proved impassable in them. Of final causes we know nothing; the immediate agent of life is not more obscure than any of the remote physical agents. If we cannot assign any reason why a seed germinates, can we tell why a stone falls to the earth?—is the one phenomenon any more comprehensible than the other? If we cannot assign any reason why a seed germinates, we can tell why a stone falls to the earth?—is the one phenomenon any more comprehensible than the other? If we cannot tell how it is that one parent should produce a countless offspring, each of which has the power of reproducing beings like itself, neither can we tell how a spark produces an extensive conflagration. It avails us little to say that the principle of life, like the principle of heat, possesses a radiant character, or has a power of self-production. We are equally ignorant how the wide spreading flame results from a spark, and how countless myriads of seeds have originated from one primordial germ.

Some parts of the science of physiology are doubtless within the reach of scientific investigation. Most of the functions of organic life are of this character. Absorption, secretion, circulation, and respiration are carried on through the medium of tubular arrangements of different kinds, endowed with specific pow

ers. We are not well informed of the nature of these actions, or of the force giving rise to them. The changes taking place in organic structures partake partly of a mechanical, partly of a chemical aspect, bearing some similarity to other physical changes effected by known agents, yet not identical with them. Some have supposed that the attraction of affinity, or the force of capillarity, was the power in question, operating in an unusual manner, under unusual circumstances; but the majority of medical writers have cut the knot, instead of untying it, and assert that it is a peculiar force, recognised under the title of vital force, life, or nature.

It is, however, most unphilosophical to resort to these vain explanations, which after all afford us no information, substituting only obscure terms as the causes of events not more obscure. Had we approached the problem of pore-action in the same spirit that has led to the development of the causes of magnetic action, a similar and equally striking advance would have been made.

Capillary attraction, considered simply as a mechanical force, is not competent to produce those changes which the pores and narrow cylinders of organic structures give rise to. The products of glandular action are chiefly compounds of a definite number of equivalents, bearing a strong resemblance to the products of ordinary chemical action; but still the operation of capillarity as a force producing motion is undeniable. Can it also produce chemical changes? Is it simply a manifestation of the electric chemical relations of matter?

Previous to entering at large into an examination of the laws of pore-action, this query will demand an answer. We shall find from what follows that capillary attraction is a force nearly allied to, if not identical with, chemical affinity. Now, the investigation of the problem of pore-action naturally divides itself into two parts. 1st. The mechanical conditions of equilibrium and movement of fluids residing in tubes of narrow diameter, but of any length. 2nd. The chemical changes which fluids so situated undergo.

The identification, therefore, of the force producing the mechanical effect, with that producing the chemical changes, is a most important point, and to this I shall direct my attention in the present communication.

There are two phenomena of capillary attraction, the conditions and circumstances of which are well known—the rise and depression of fluids in tubes of a certain diameter, and the adhesion of flat solid plates to the surface of fluids. From the former of these this kind of attraction has derived its name; the latter furnishes us with the means of making researches, devoid of ambiguity, in reference to the physical cause of capillarity.

If a circular disk of glass, or any other solid substance, be

placed on the surface of any fluid, by means of a handle, it will adhere thereto with a certain force, which may be measured by means of a balance, but which is sufficiently evident when attempts are made to lift the disk with the hand. This force is known under the name of capillary attraction. An investigation of its physical cause, and the laws representing it, involve the fundamental propositions of pore-action and passage through tissues.

The phenomena of capillarity are brought about by electricity, operating under peculiar circumstances. They are due to a disturbance of the electric equilibrium, and hence are intimately allied to all kinds of chemical and vital changes.

Place a glass plane on the surface of mercury contained in an insulating vessel; let the mercury be connected with an electrometer by means of a wire. Now, so long as the glass plane and the mercury are in contact, the electrometer evinces no disturbance; but as soon as the plane is raised by its insulating handle, electricity is instantly developed, and the gold leaves diverge. As there was no electrical excitement whilst the plane and the metal were in contact, it is a legitimate inference that the electricity now developed was the cause of their strong attraction or adhesion; and this is corroborated on taking the glass plane to another electroscope, when it will be found that it is electrified positively and the mercury negatively; and that consequently when they are brought into the vicinity of each other, a powerful attraction *must* result.

A cause of attraction being thus developed, it would be very unphilosophical to seek for other agencies where one so competent to produce all the effects is observed to exist. For in every case where a solid plane reposes on the surface of a fluid not wetting it, a large amount of electricity of very high tension is produced, the electricity of the surface of the plane being always opposite to that of the liquid. They *must therefore attract each other*. I express here only a fact, not involving any disputed hypothesis whatever, as to whether that development of electricity originates in the mere contact of the bodies, their chemical action, or any other cause; but it is a fact, that when any solid reposes upon any fluid, provided its surface does not become wetted, a development of electricity uniformly takes place, and a powerful degree of attraction must necessarily ensue.

The postulate here introduced requires explanation, for electric excitement is not observed if the solid surface is wetted. Solids bear a peculiar relation to liquids, being wetted or not wetted by them. Most solids, for instance, are wetted by water, and but few by mercury; the surface of the glass is readily moistened by alcohol or oil, but not by melted sulphur or mercury: hence the latter, from its not adhering to the skin, was called by the



older chemists *aqua non madifaciens manus*. The circumstance, that no electrical excitement is observed when a solid surface is wet, might appear at first sight contradictory to the hypothesis here assumed. A more accurate examination, however, places it in a very different light, and shows that the phenomena observed are exactly such as they ought to be hypothetically. If a disk of glass is placed on the surface of water and then removed, the gold leaves of the annexed electroscope are not affected, for, strictly speaking, no rupture has taken place between the solid and the fluid; the thin film of the latter in contact with the former still remains so: it is only the cohesion of the watery particles that is overcome, not the adhesion of the solid to the fluid, and hence no electrical development appears.

Geometers have shewn the exact relation a solid must bear to a fluid to be wetted by it. It results from the mathematical investigations of CLAIRAUT, that if the attraction of the particles of the solid for those of the fluid is more than half the attraction of these last for each other, the solid will be wetted; but if it be less than half, the solid will not be wetted. An experimental proof of this may be obtained by counterposing a disk of glass at the end of one of the arms of a balance, by weights in the scale, and then lowering it on the surface of some mercury in a cup; it will be found that a certain weight must be added in the scale to detach it. Next in place of the disk of glass, substitute a plate of *amalgamated* copper, of the same size and weight, and ascertain the force required to detach it; this will uniformly be found more than double the former weight. The first weight expressed the attractive force existing between a surface of glass and mercury; the second the cohesion of a cylinder of mercury of the same diameter, and the numbers obtained experimentally corroborate the investigations of Clairaut.

I dwell on this part of the phenomenon because it is of no small importance; the same conditions that determine whether or not the surface of a solid is to be wetted, determine also whether a liquid shall pass through a pore, and move forward in a capillary vessel.

The difficulty arising from the non-development of electricity, where the solid surface is wetted, being thus dismissed, we next enquire whether the hypothesis here assumed will give numerical results analogous to those procured by experiment. In other words, if two solids which adhere to a certain fluid, with forces differing in amount, develop upon rupture, quantities of electricity in the same ratio. As a general result, the balance and electrometer prove that this is the case. Beeswax, which adheres to mercury with much less force than gum lac, develops likewise much less electricity. Gum lac, which adheres less strongly than glass, likewise develops much less electricity; but when

we attempt to run a comparison in this manner along a series of substances, we find there are many disturbing causes, which in most cases incapacitate us entirely from making comparable results. Much depends on the relative conducting power of the surface employed. A plate of iron may be separated from a surface of mercury, which does not wet it, with very small disturbance of electric equilibrium, arising from the high conducting power of the metallic plate, which enables a transfer of any free electricity to take place if the plate should tilt on one side, or any thing affect its horizontality during the act of separation. In proportion as the conducting power increases, although the force of adhesion may remain the same, the total effect on the electrometer should diminish; and this is agreeable to experience. Again, the presence of moisture on any part of the touching surfaces will vitiate the results; partly owing to its high conducting power, but chiefly to the circumstance that it hinders the surfaces under trial from ever coming into contact.

The circumstance of this great variability in the amount of developed electricity, is in itself strong evidence of relationship between the supposed cause and the effect. Gay Lussac found that it required a weight sometimes of 158 and sometimes of 296 grammes, to detach a certain disk of glass from mercury, depending on causes which were not very apparent. An effect thus differing in amount indicates a cause of like variability, or subject to many disturbances.

I assume, therefore, that the agent bringing about capillary phenomena is identical with that producing chemical action, and that both may be referred to electricity. The force of cohesion bears the same relation to both, acting on both as a disturbing power. Nay, we may even take a much more extensive view of the matter; and from the ratio these forces bear to each other, predicate the effect of their combined action, which may be classed under three distinct heads.

1stly. If the force of attraction of the particles of a solid, for the particles of a fluid, exceeds half the cohesive force of the latter for each other, but is not equal to the whole force, the fluid will pass through a pore formed of that solid substance; and in capillary vessels consisting of it, will be depressed below its hydrostatic level.

2ndly. If the force of electric attraction of the particles of a solid, for the particles of a fluid, exceeds half the cohesive force of the latter for each other, but is not equal to the whole force, the fluid will pass through a pore formed of that solid substance, and in a capillary tube of it, will rise above its hydrostatic level.

3dly. If the force of electric attraction of the particles of a solid for the particles of a fluid, exceed the whole cohesion of the latter, *chemical union* ensues.

In thus assimilating the force producing pressure on planes, and motion in narrow pipes, with the force producing chemical changes in the constitution of bodies, a great advantage is gained in simplifying physiological investigations in respect of the action of capillary systems. It is an electrical force that determines all kinds of constitutional changes developed in bodies by the chemistry of organic life, and it is a manifestation of the very same force that carries some fluids along the almost invisible vessels of living structures, and denies to others a passage. All the phenomena of inorganic chemistry are the result of the balancings of the force of cohesion on the one hand, and electrical attraction on the other. If Berthollet was wrong in supposing that chemical affinity as an acting force had no existence, other chemists have equally erred in supposing that all kinds of changes, without any limitation, were due to it. Whether we investigate the phenomenon of chemistry or of capillarity, we have the same forces to deal with, acting as antagonists to each other; and hence the whole effects imputed to capillary attraction may be regarded as belonging to that extensive class which the science of chemistry considers.

There is a variety of facts recorded by writers on capillary attraction, which an application of these principles readily explains, though hitherto they have been regarded by philosophers as remarkable anomalies. Such is the observation of Huygens, that it was possible to cause mercury to stand in a barometer seventy inches high; or that of P. Abat, of a single deviation in the hydrostatic level of the same fluid in different branches of a syphon.

The force of attraction which produces pressure, when plane solids repose on the surfaces of fluids, under other circumstances produces motions of various kinds. If a tube of small diameter be plunged into a liquid, the level within the tubes does not correspond with that outside, except under very peculiar and very unusual circumstances; but sometimes the liquid rises far above its level, and sometimes it is depressed, the amount of disturbance taking place in both cases being in the inverse ratio of the diameter of the tubes. All fluids which can wet the surface of a narrow pipe rise in it; those which cannot wet it are depressed. Geometers have shown, that if the attractive force exerted by the pipe upon the liquid be more than half the cohesion of the particles of the latter for each other, there will be a rise; if it is equal, the level of the fluid inside and outside of the pipe will be the same; and if it be less than half, there will be a corresponding depression. Now, extensive observation proves that these three cases are always accompanied with certain peculiarities, as respects the surface of the fluid in the tube, as is represented.

In every case where the fluid rises, it is observed to be terminated with a surface concave upwards. If the level is the same



as it should be hydrostatically, then the terminating surface is a plane; and if there be a depression, then the surface is convex upwards. Whenever, therefore, a tube of narrow diameter is placed in a fluid, if the action of the particles of the tube on the particles of the fluid be less or more than the attraction of these last for each other, motion ensues, and the fluid falls or rises to a height determined by the diameter of the tube.

If the tube be perfectly cylindrical, and there be conveyed into it a short column of fluid, it will be found that this fluid rests in any position, provided the tube be horizontal. But if the tube be conical instead of cylindrical, and a little column of fluid, be introduced into it, then a motion of the whole drop ensues, the progress being made towards the narrow extremity. In this way capillary attraction is competent to produce motions of various kinds.

All these disturbances of ordinary level, and these motions, are found to result from the action of the surface of the liquid. From a consideration of these disturbances, Laplace deduced his theory of capillary action; a theory which, with a little modification, is now generally adopted. The thickness or thinness of the tube has no effect whatever on the phenomenon; nor does the substance of which it is composed exert any influence. Every thing is made to depend on the figure of the bounding surface, which necessarily acts more and more powerfully as the diameter of the vessel becomes narrower.

Capillary attraction does not take place only between solids and fluids; it is exhibited when solids alone are made use of. In virtue of this power, two pieces of lead cohere with great energy to each other, as also is the case with two planes of polished stone, or plates of glass. When glass is used, electricity of very high tension is readily detected, one of the pieces being positive and the other negative, it would, I suppose, hardly be denied, that the force operating in the case of glass is also the force that operates in the case of stones. Is it not, then, a legitimate supposition, that the adhesion of two pieces of lead is brought about by the same agent, whose presence is masked by the high conducting power of the metal?

Between solids and gases capillary action likewise takes place. On the surface of all kinds of solids atmospheric air remains in a state of condensation, as is made evident when such bodies are placed beneath water under an exhausted receiver; the air appearing in copious bubbles, studding the surface of the metal.

Now, having a power, the operation of which over inorganic masses is so extensive, it is for us to enquire how far the phenomena of organic systems depend upon its working. Those numerous pores and pipes, and capillary vessels, which abound in all kinds of living structures, but of whose action we are so igno-

rant, point out to us capillary attraction as one of the great forces in play, determining all kinds of motions and physical changes. To identify the force producing motion of a chemical character, with that effecting physical change, gives a unity to the action of powers which have hitherto been multiplied without avail, and stamps simplicity and symmetry on actions that are very diverse.

Hitherto we have treated of capillary attraction as a force producing certain simple results, as the adhesion of pieces of metal, or of plane solids to the surface of fluids, or the rise or fall of fluids in tubes. All these consist of binary arrangements; and it is probable, as will hereafter be shown, that certain simple processes in the organic kingdom are example of similar simple forms of action. But, arrangements of a more complex character may be imagined, and are known to exist, where, instead of there being two, three or more elements are concerned. Ternary arrangements lead to the consideration of the doctrine of endosmosis, by which we understand the passage of two fluids or gaseous bodies through a narrow channel, in opposite direction, at the same time.

The law of horizontality of fluids meets with a remarkable exception when the containing vessel is a capillary pipe, as has been already stated; for a change of level ensues, according as the fluid will or will not wet the walls of the tube. Laplace has shown that the immediate cause of this rise or fall is the peculiar figure of the surface of the liquid in the pipe. The theory embracing these facts will be found in the supplement to the tenth book of the *Mecanique Celeste*. M. Poisson, from a consideration of the heterogeneity of the liquids in ternary arrangements, has endeavoured to refer all the phenomena of endosmosis and transundation through tissues to common capillary attraction, but with a want of success not usual to the labours of that excellent mathematician; not that we are to deny the result to which he has arrived, for that is only the expression of a fact, but the steps of his investigation are unquestionably faulty, for the same reasoning will apply to tubes of all diameters, and it does not satisfy the condition that both liquids shall pass in opposite directions at the same time.

It is not necessary to proceed here to discussion of the remoter data of the mechanical part of this question, nor to refer to the elementary conditions of pressure upon a surface, nor to the action of solid bodies alone; though in each of these cases the investigation might readily be carried out to the conditions of motion and repose. Let us proceed to investigate the case where two fluids are adjacent to each other, but do not communicate, except through a pore. This case involves the theory of tissue action. Taking for granted the theory of Laplace, of the equilibrium of liquids in capillary tubes, we may assert,

1stly. That if two fluids *A*, and *B*, whose attraction for each other is greater than the cohesion of the homogeneous particles of either, communicate with each other through a pore, the walls of which attract the one more than the other, motion through that pore will ensue, both liquids passing at the same time in opposite directions.

2ndly. If we take particles receding from the axis of the pore, the forces soliciting any one of them to move in a direction with the axis, gradually decrease, whilst the rectangular forces increase in intensity.

3dly. In the axis of a pore and two molecules, *a* and *b*, situated in the fluids *A* and *B* respectively, are acted upon by two system of forces—one tending to produce motion parallel with the axis, and the other at right angles to it. The forces which tend to produce motion parallel with the axis, and the other at right angles to it. The forces which tend to produce motion parallel with the axis are not compensated, but all the rectangular forces compensate each other.

4thly. Here the surfaces of the fluids *A B* are described by a figure representing a pore, by two parallel lines, with a curved line passing from one line to the other, to represent the conical shape of the fluid *B*, the axis of which is the axis of the pore; and to that of the fluid *A*, a corresponding concavity and passing up the sides of the pore to where the cone of the fluid *B* leaves them. In this figure, *b* marks the apex of the cone of the fluid *B*, *a* and *c*, the points where this fluid leaves the sides of the pore, and to which the fluid *A* rises in contact with the sides, and lastly, a line is drawn transversely to the pore, representing an imaginary plane, and marked *c f*, and dividing the fluids *A* and *B*, where they pass each other. This figure is thus described by Dr. DRAPER:

Now, the forces which act on the side *A* of the plane tending to produce motion in *B*, are much greater than the forces on the other side tending to restrain it. Moreover, the action of these forces is at a maximum at the point *b*. The figure of contact, therefore, becomes changed, the point *b* advancing along the axis, and making the opposing particles retire in the directions of least pressure; the fluid *B* continuing to pass down the axis of the pore; and the very same reasoning shows that at the same time *A* will pass in the opposite direction. If, therefore, two fluids are on opposite sides of a barrier, and only communicate with each other by a pore through it, motion in that pore will ensue, both liquids passing in contrary directions, simultaneously and co-axially.



5thly. And the same reasoning which applies in the case of a pore, will also apply to a crystalliform plate or tissue, whose apertures are all capillary tubes.

30. In the view of the subject, as is evident, I have imputed the phenomena of tissue action to the force of capillary attraction, taking into account the heterogeneity of the system of fluids. I have not spoken of the relative difference of cohesive force, which, as might be shown, aids in producing the very same results. From these considerations we can deduce the condition of equilibrium, for it is evident that as soon as the chemical composition of the fluid on each side of the pore becomes identical, the forces solliciting motion each way, antagonize each other completely. It was the heterogeneity of the fluids that gave rise to the first movement, and kept it up; but so soon as the media on each side became homogeneous, motion ought to cease; and that this is the case, is abundantly proved by experiment.

With respect to the *diameter* of pores, there are some important conditions. Let a circle  $a b c$  be a pore, whose diameter exceeds double the radius of the sphere of sensible attraction of its own particles; or, in other words, whose axis is beyond the influence of the attractive force of its own walls. If a cylindrical column of fluid,  $e f g$ , of a certain diameter, moves through it, the circumferential parts of that cylinder will be brought under the direct influence of the walls of the pore, but its axial portions only indirectly through the intermedium of the cohesion of the fluid itself. We may say, therefore, that the axial portions of such a cylinder are unaffected by the pore itself; but if the diameter of the pore be supposed continually to diminish by degrees, all parts of the cylinder will at last be brought within the influence of the walls of the pore. Another mode of viewing this condition of things may place it in a still clearer light. When a liquid rises in a capillary tube of certain diameter, only those portions are under the direct influence of the attractive force of the tube which are nearest to it, the central columns being entirely unaffected; as, when water jets out through a narrow pipe, it is only those portions that are directly in contact with the sides of the pipe that are subject to its resisting influences, any disturbance which the central particles feel arising only indirectly from their cohesion. A pore in a piece of charcoal may suffer a column of water to go through it without in anywise affecting the central portions of that column, by reason of its size; but should the diameter of the pore be made to decrease, it is obvious a limit might finally be reached, when every particle that passed should come under the direct influence of the physical force of the pore, and none pass by mere leakage or oozing. The importance of this element, viz: the variability

of the diameter of the pore, is greatly to be insisted on. It has heretofore been pointed out in this Journal, and in the Journal of the Franklin Institute, but does not seem to have attracted that attention which it deserves. Chemists are still in the habit of co-ordinating the passage of liquids, through stucco plugs and pervious barriers, with that through tissues and liquids. Physiologists carry out the same error, in supposing that there is no essential difference in the motion of fluids in the capillaries and through the pores of tissues.

It is not alone in the vital functions that we meet with applications of the principles of capillary action; the mechanical functions furnish numerous instances. The organs of progression of some animals which delight to walk upon water, are provided with an apparatus of hair, calculated to repel that fluid; hence gnats and certain other insects have no difficulty in passing over the surface of water. By the same means the hydra suspends itself, without effort, in that element; for having exposed for a time the extremity of its foot to the air, so that it may become dry, it, by repulsion, forms a cup-shaped hollow around it, the head of the insect hanging down in the water beneath.

Organs of exhalation and absorption are unquestionably capillary systems. The stomata of plants, which botanists suppose to discharge these functions, are of this character; they furnish a well marked instance of the accommodation of apparatus to suit physical conditions. Plants growing beneath the surface of water have no stomata; but if, by any means, they reach the atmosphere and vegetate in it, these organs are produced for the purpose of discharging, under the new order of things, offices which were accomplished by other means. The spongioles of roots, acting as capillary systems, drive the fluids they absorb from the earth, through the tubular vessels of trees, with a force of several atmospheres, extending themselves at a due distance from the trunk, where they may meet with the water that falls from the leaves. In some orders of living things, which are not accommodated with distinct orifices for the reception of food, nutrition is accomplished by capillary systems. In this manner the *porifera* expose a wide surface to the seas, and draw in nutrient matter through their microscopic pores, discharging the surplus as excrementitious matter through their papillary orifices.

Like the lungs of the mammalia, the leaves of trees are respiratory organs, composed of capillary systems; their mechanical functions are not so complete, though their chemical functions may be identical. They demand no nervous cords to be spread upon them to give them motion and keep up their play; the breezes in which they tremble perform the office of carrying off

the exhaled impurity, and the rays of the sun furnish them with their vital force, enabling them to effect the decomposition of carbonic acid, and provide a store of carbon for the purposes of the economy.

In identifying the mechanical with the chemical force of organic structures, we see another proof of that unity of design existing through the entire range of living things. Functions of all kinds are accomplished by arrangements of every sort in different classes, yet no one will deny that they all follow one original type. Digestion, as it takes place in the stomach of man, appears a highly complex phenomenon, depending, as some say, partly on the tissue action, partly on nervous and partly on other powers. But are not analogous changes wrought without all this complexity of apparatus in the hydated, which may be taken as the elementary type of the stomach; or in the tænia, which is a colony of stomachs? The polygastric infusorials, some of which have hundreds of these organs, and even the mammalia, do not digest more perfectly than the hydra, a carnivorous polypus, which may be turned inside out without detriment. The laws of digestion, followed by the one, are followed too by the other. If the organ of the one respects the presence of living matter, and refuses to act on it, so does the other; yet the one is furnished with a highly complicated assemblage of muscular bands, of glandular apparatus, of blood-vessels, of nerves, and the other is not.

In the higher orders of life processes are carried on by multiplied apparatus, without, however, deviating from the principle of the original simple type. The gift of a new faculty, or the addition of a new organ, brings with it a corresponding change in the arrangement of the whole plan. An engineer, who wishes to adopt a machine to the execution of some new task, alters every part, no matter how remote it may be from the acting point, until every wheel and lever executes its work co-ordinately with all the others; the prime mover remains unchanged, though the general character of the machine may have undergone a renovation; and as all machines, no matter of how many parts they are composed, nor of how many wheels they consist, nor how intricate soever may be their resulting motions, may have their power reduced to and represented by a simple lever, so also organic functions, though often brought about by highly complex arrangements, find simple representatives in the lower orders of life. A concentration, or a development of any organ, is often demanded by change in a remote part of the fabric, when even the connexion may not be very evident. Animals, consisting simply of digesting cavities, require no vascular system for propelling or containing a nutritious fluid; they are not in need of separate tissues, devoted to its oxygenation, nor



of an insulated respiration, nor do they demand distinct biliary organs; when the nutritious chyle is produced in the stomach of zoophytes, it finds its way into the intercellular spaces, and there circulates without vessels, undergoing through the external tegument the chemical changes. In many insect tribes, the bronchial tubes are spent upon the peritoneum, and respiration takes place directly upon the alimentary canal. With, modification of functions, change of external figure is always involved; and as these progress together, systems of living things are constructed, referrible to one common original type. It is thus, in the echinodermata, we trace up successive steps from the sea urchin to the asterias, and from that to the pentacrinite; a developement of the same parts of the structure continually taking effect, until the extremes bear no sort of resemblance to each other.

Had the production of living things been effected by the operation of second causes, we might look with Lamarck, for some law of successive developement, which should contain the origin of each order and species. We might regard the rudimentary teeth of whales, or the subcutaneous feet of the ophidia, as abortive results of such a law. Considering, the brain as a developement of the spinal axis, we might trace in the form of the cranial bones, a developement of a system of vertebræ, brought about as a consequence of the very same laws. We might run a parallel of analogies, between the crustaceous and vertebrated animals, and exogenous and endogenous plants; we might take the cephalopodous mollusks, as furnishing the first rudiments of an internal skeleton, and trace its increasing complexity to meet certain ends, until its perfect developement in the mammalia. In this latter class, we might dwell upon the uniform existence of seven cervical vertebræ, as giving evidence of a persistence in the plan of structure, in species so remote from each other, as the cameleopard, the whale and the mole. Parting from the dorsal vessel of insects, the first rudiments of an aorta, we might follow out the complications of the higher arterial systems. In all the varieties of respiration, whether aquatic, aerial, or mixed, we might see the reproduction of one original chemical design, and in every instance of a concentration of machinery or functions, we might find an impress of the action of external formative agents.—*Hampden Sydney College, November 20th, 1837.*

DR. CANQUOIN'S *Formulae for Preparing the Phagedenic Paste.*

- No. 1. Chloride of zinc one part, wheat flour two parts.  
2. Chloride of zinc one part, wheat flour three parts.  
3. Chloride of zinc one part, wheat flour four parts.  
4. Chloride of zinc one part, chloride of antimony half a part, wheat flour two parts and a half.

Twenty four to thirty drops of water are to be added for each ounce of chloride.

The preparation of the phagedenic paste requires the utmost care and attention; hence to procure it properly, the following instructions must be scrupulously followed. The chloride of zinc, reduced to powder, is to be mixed, as quickly as possible, on a slab, with the given quantity of flour. One half of the mixture is immediately to receive its proportion of water, and to be worked up progressively with a spatula, until it forms a homogeneous honey-like paste. This paste is to be brought to the desired stiffness by trituration with the remainder of the dry ingredients, well beat for a few seconds, and then rolled out into cakes or wafers, of from half a line to four lines in thickness.

The quantity of water must be proportionally augmented, according to the increased amount of flour in the second and third formulæ.

The antimonial paste, No IV., is to be moulded into a crayon shape; because, as it preserves constantly the consistence of soft wax, a suitable thickness can also be given to it, so as to adapt it to the form of certain cancerous tumours, presenting inequalities of surface.

As, however, the flower employed in the above formulæ consists of starch, gluten, and vegetable albumen, it will produce a complex combination with the chloride in the phagedenic paste, which may blunt or interfere with its erosive action; or possibly undergo some fermentative change when applied to an illeconditioned ulcer, and the viscosity of the compound give rise to more or less difficulty in the manipulation. It therefore occurred to Dr. A. Ure, of Glasgow, that if some inert, inorganic powder were substituted for the vegetable matter, capable of absorbing and retaining a sufficient quantity of moisture to form a paste, which should be a simple mechanical admixture, it would then be possible to turn to account the full escharotic powers of the chloride. The anhydrous sulphate of lime, in impalpable powder, will be found to realize the above conditions. Mixed with the chloride of zinc, in the proportions already indicated, a putty-like paste

may be obtained, after these have been well incorporated together with a few drops of water.\*

The paste so prepared is perfectly plastic. In its composition the calcareous sulphate seems to perform the part of a porous medium, which allows the escharotic gradually to exude into the morbid texture. In proportion as it is abandoned by its deliquescent ingredient it acquires a firmer consistence, until at length it becomes concrete, and constitutes an impervious case for the eschar.—*London Medical Gazette*, 19th Dec., 1835.

*Method of using Dr. CANQUOIN'S Phagedenic Paste.*—Where the integuments are sound, the epidermis should be removed by means of a blister; and on the following day one or the other of the preparations described in the preceding article, corresponding to the thickness of tissue to be destroyed, is to be applied to the cutis of the diseased part. The sensibility of the surface must also be considered; for should it possess but a feeble degree of vitality, the most powerful form is to be preferred.

The paste No. 1. four lines thick, applied during four days, is capable of producing an eschar of from one and a half to two inches in depth. The same paste, three lines thick, applied during three days, will furnish an eschar of one inch, at least, in depth; the same compound, two lines thick, will in two days determine an eschar of not less than half an inch. The paste No. I., of one line, will yield, in twenty-four hours, an eschar of three lines. Finally, the paste, No. I., of half a line, will produce, in the same time, an eschar of at least one line.

These changes will manifest themselves with the above precision only on tissues endowed with a considerable share of sensibility, and of which the consistence is nearly normal. In the gristly (lardacé,) almost fibro-cartilaginous degeneration, about one-third is to be deducted from the thickness of the eschar above mentioned.

No. II. is employed in case of cancerous ulceration and superficial carcinoma, which are attended with much pain.

No. III. is eligible in every species of cancerous affection, occurring in nervous subjects who are incapable of supporting the violent pain which the preceding more concentrated escharotics might occasion. It is so much less productive of suffering, as it is slower in its action.

Lastly, No. IV. the antimonial paste is best adapted to nodulated cancerous tumours, for which a most decided escharotic action is required.

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\* Special care must be taken to prepare a pure sulphate, by calcining the crystallized gypsum at a gentle heat in an oven; for the Paris plaster of the shops is often sophisticated with chalk or whitening, which would immediately decompose the metallic chloride, and impair its qualities in a greater or less degree.



These preparations, applied over a denuded surface, excite, in a few minutes, a feeling of heat, which, ere long, rises to a burning heat; which unpleasant symptoms may be relieved by an opiate enema.

When the operation of the paste is complete, it may be gently taken off, and the eschar covered with an emollient poultice until its separation, which usually happens, as formerly stated, from the eighth to the twelfth day, according to the thickness of the layer employed. The application is to be repeated again and again till the whole morbid structure is removed; after which the surface is to be treated with simple digestive ointment; or, in case of an acute cancer, with cataplasms, until the cure is finished.

In certain modifications of carcinomatous tumours that are voluminous and prominent, Dr. Canquoin, instead of applying the caustic on the anterior segment, surrounds the base with a ring of paste two lines broad and four deep.

Should the carcinoma present a central depression, its destruction may be accomplished by using the phagedenic paste in a spiral form.

The chloride of zinc will probably form a valuable means of curing incipient cancerous ulcers of the uterus. These, in their early stage, may be looked upon as purely local affections, since Bayle has demonstrated, by numerous dissections, that the tissues of the organ are perfectly sound at the distance of two or three lines above the solution of continuity. In some instances it is reported that they have been healed by the topical use of the acidulated nitrate of mercury, as also by the caustic potash: but as both have been objected to in practice, the former from its tendency to spread over the healthy parts and excite inflammation, the latter because it is too uncertain in its effects, corroding too profoundly, and giving rise to fatal inflammation, amputation of the cervix has come to be regarded, by many, as the sole alternative for eradicating the disease. Now, the chloride of zinc, liable to none of the inconveniences that have been imputed to these other caustics, employed in its most concentrated form, will furnish its characteristic dry, easily definable eschar, destroying the morbid parts and leaving behind a healthy surface, which will rapidly cicatrize; thus saving the patient the necessity of submitting to an operation which, although unaccompanied by much pain, is yet most repugnant to her feelings.

Cauterization with the chloride must likewise prove advantageous in carcinomatous affections of the tongue, lips, and of the rectum, where arsenic, from its powerful poisonous qualities, is totally precluded.—*Ibid.*

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Dr. CANQUOIN'S *Resolvent Pomade*.—The following ointment is recommended for effecting the destruction of extensive

scirrhus surfaces, previously flattened by long-continued methodical compression, as also of certain dense scirrhi. Take of oxygenated pomade, prepared by triturating eight parts of boiling axunge with one of nitric acid, one ounce; melt this by a gentle heat, and add to it three drachms of the acid subdento-nitrate of mercury. Increase the heat a little, till the nitric acid becomes decomposed, so as to proxygenate the pomade, and bring the salt into intimate union with it. The ointment, when, well prepared, is very hard, and of an orange-yellow colour.

Dr. Canquoin describes the case of a woman affected with a scirrhous of one half of the face, who had been previously treated for it, but without benefit; and she seemed doomed to become, ere long, a victim to the frightful malady. However, thirty-five days' application of the above ointment sufficed to work a cure, without the slightest trace being left.—*Ibid.*

Dr. CANQUOIN'S *Maturative Ointment*.—Dr. Canquoin has procured in two or three months time, and even less, a softening and suppuration of indolent scirrhus tumours of a violet-red hue, by the following application. Take of the acetic infusion of the bark of spurge laurel,  $\mathfrak{z}$ iss.; of molasses,  $\mathfrak{z}$ iss.; olive oil,  $\mathfrak{z}$ j.; ox bile,  $\mathfrak{z}$ ij. Mix together, and reduce, by the aid of heat, to the consistence of an ointment. Withdraw the heat, and add, unguent. basilic.  $\mathfrak{z}$ iss.; cerati fusci,\*  $\mathfrak{z}$ iss. Mix the whole well together, and incorporate with each ounce a drachm of the subdento-nitrate of mercury.—*Ibid.*

*On Sleeplessness, and its treatment. By R. J. GRAVES, M.D. Extracted from a clinical lecture delivered at Meath Hospital, Dublin.*

Sleeplessness is a very curious result of disease. It accompanies certain morbid conditions of the system brought on by actual disease, or by grief, care, and various other forms of mental disturbance, continues to harrass the unhappy sufferer night after night, and frequently resists the most powerful and decided narcotics. I do not intend to enter into any inquiries respecting the different states of the constitution in which it occurs; my purpose is merely to offer a few practical remarks on the more obvious and striking examples, with the view of illustrating the cases to which I have directed your attention.

There is a form of sleeplessness which is frequently the pre-

\* Or Onguent de la Mere, prepared with litharge, axunge, butter, and mutton suet, of each 25 parts, yellow wax 18, and black pitch 8.

cursor of insanity, and which has been well described by my friend Dr. Adair Crawford. The watchfulness in such cases is accompanied by the well known symptoms of incipient mental derangement, and its treatment is therefore inseparably connected with that usually resorted to in cases of threatened insanity, and embraces employment of means moral as well as physical. Of these it is not my intention to speak; I may observe, however, that Dr. Crawford has found opium, gradually increased to very large and frequently repeated doses so as to produce sleep, the best remedy.

In the case of jaundice, the patient passed several nights without any sleep. He was just beginning to recover from the jaundice when this new symptom appeared, and I directed your attention particularly to the circumstance, because every manifestation of nervous derangement connected with jaundice should be carefully watched. It frequently happens that jaundiced patients sleep too much, and in some cases the disease is accompanied by convulsions, succeeded by coma, most alarming symptoms, and almost invariably the harbinger of a fatal termination. Dr. Marsh was the first who directed our attention to the great fatality of those cases of jaundice in which convulsions occur: I have seen but one instance of recovery. It was in the case of a gentleman labouring under icterus, very considerable hepatitis, with enlargement of the liver and anasarca, with ascites. He was treated by Dr. Osborne and myself, and had at least a dozen long and violent convulsive paroxysms, ending in coma, succeeded by temporary forgetfulness and fatuity. Repeated leeching of the right hypochondrium, active purgation, and mercurialization of the system removed all the symptoms of disease, and he slowly but perfectly recovered. A very able and original writer, Dr. Griffin of Limerick, has detailed the particulars of some interesting cases of this nature in the *Dublin Medical Journal*. You perceive, therefore, that in jaundice every thing denoting an unusual state of the nervous system, whether it be too much sleep, or too little, demands your attention.

In this man's case the jaundice was the result of an attack of hepatitis. We treated it with leeches, blisters, and the use of mercury, and in the course of a few days the stools became copiously tinged with bile, and symptoms of improving health appeared. At this stage, the dejections being bilious, but the jaundice still remaining, he began to exhibit symptoms of restlessness and nervous irritability, and finally became perfectly sleepless. Here, gentlemen, we had to deal with a new symptom, extremely harrassing to the patient, and likely to react unfavorably on the original disease. As a preliminary step I determined to evacuate the bowels, and for this purpose I prescribed



a purgative draught, consisting of five ounces of infusion of senna, half an ounce of sulphate of magnesia, a drachm of tincture of senna, and a scruple of electuary of scammony. My object was to purge briskly, and then give a full narcotic. In all cases of jaundice depending on hepatic derangement, after you have succeeded in producing bilious evacuations, you should never omit prescribing an active aperient every second or third day for the space of ten days or a fortnight, with the view of carrying off the remains of the disease so as to prevent the occurrence of a relapse. Hence you will find such cases very much improved by the use of Cheltenham water, taken every day for three or four weeks *after the reappearance of a bilious tinge in the alvine discharges*. The stimulus of the purgative causes an increased flow of bile in the intestines, which removes the hepatic congestion, and carries off what is popularly termed the dregs of the disease, and promotes a rapid and complete recovery. It is a simple but successful practice, and I would advise you never to omit its employment in cases of this description.

With respect to purgative mixtures, I may observe that you should prescribe a larger quantity of the infusion of senna than is generally ordered, if you wish to secure its certain and decided operation on the intestines. Hospital nurses, who reason from facts and experience, know this, and when directed to give a senna draught they always give a small tea-cupful. They administer from four to six ounces at a time, and I have observed that in this way the action of the medicine is more certain, and the benefit derived from it more extensive. I am convinced that the usual mode of giving this valuable purgative in private practice is bad; the quantity given is too small, and consequently it is necessary to repeat the dose several times, a mode of proceeding apt to occasion much nausea and griping, I would therefore recommend a quantity varying from three to six ounces, to be administered in all cases where the patient's condition will admit of free purging. A most accurate observer of the effects of medicines, Mr. Kirby, is in the habit of ordering purgative mixtures in the chronic cases to be taken at bed-time, and not, as is usually done, in the morning. He asserts that their action is milder and less irritating to the bowels when the patient lies in bed and is asleep until the period of their operation, than if he were up and about.

After the purgative had produced four copious discharges, I prescribed eight minims of black drop, to be taken at a late hour in the evening. Whenever I give opiates to procure sleep, I always observe the rule laid down by Dr. McBride, (a celebrated physician of this city) to select the period at which nature usually brings on sleep, and which varies according to circumstances and the habits of the patient. Whenever you have to deal with

watchfulness in patients labouring under morbid states of the constitution, as for instance, hectic, inquire when the tendency to sleep usually occurs, and administer your narcotic about an hour or two before its occurrence. It is between three and five o'clock in the morning that the inclination to sleep is strongest; it is about this time that sentinels are most apt to slumber at their post, and consequently attacks upon camps or cities, made with the intention of effecting a surprise, are usually undertaken about this period of the morning. How well marked is the periodic tendency to sleep at this hour in all patients labouring under hectic fever produced by whatever cause. How often do we hear the poor sufferer complain of restlessly tossing about in his bed until three or four o'clock in the morning, when at last sleep, welcome although uneasy, for a few hours separates the patient from his pains. If given at an early hour in the evening, the effect of the opiate is not coincident with this periodic attempt of the constitution, and it fails in producing sleep, but if exhibited at a late hour, it begins to produce its soporific effect at the very time when nature inclines the harrassed sufferer to repose, and the result of these combined influences is a deep, tranquil, and refreshing sleep. By observing this simple rule, I have often succeeded in producing sleep in cases where various narcotics had not only failed, but even added considerably to the irritation and discomfort of the patient. \*

In cases of sleeplessness, where you have administered an opiate with effect, be careful to follow it up for some time, and do not rest satisfied with having given a momentary check to the current of morbid action. To arrest it completely, you must persevere in the same plan of treatment for a few days, until the tendency to sleep at a fixed hour becomes decidedly established. You must give an opiate the next night and the night after, and so on for five or six nights in succession, and where the watchfulness has been of an obstinate and persistent character, narcotics must be employed even for a longer period and in undiminished doses. I do not allude here to the sleeplessness which accompanies confirmed hectic and other incurable diseases; such cases require a particular mode of treatment, and generally call for all the varied resources of medicine. But in those instances of watchfulness, which are frequently observed towards the termination of acute diseases, it is always necessary to repeat the opiate for some time after you have succeeded in giving a check to this symptom. You need not be afraid of giving successive opiates lest the patient should become accustomed to them, and a habit be generated; for the rapid convalescence and renewed health, which are wonderfully promoted by securing a sound and refreshing sleep, will soon enable him to dispense with the use of opiates.

Another disease in which sleeplessness is a prominent symptom, is delirium tremens. We have had an example recently in our wards, and you have seen the means employed to overcome it. The patient came into the hospital with symptoms of extreme nervous excitement and watchfulness, which had continued for some time, and were brought on, as is most commonly the case, by repeated fits of intoxication, succeed by a pause of perfect sobriety—in Irishmen the result of necessity or accident. In this man you must have remarked the signal benefit which attended the use of tartar emetic and opium, and how rapidly the watchfulness disappeared. I shall not enter into the details at present, as I purpose to return to this subject on a future occasion.

There is, however, one form of nervous irritability, frequently observed in persons who are in the habit of drinking freely, but without running into excess, and presenting, as it were, a shadow of delirium tremens, on which I shall make a few remarks. This curious state of the nervous system is generally found to exist in men about the middle period of life, and who consume a larger quantity of spirituous liquors than they are able to bear. Such persons, without suffering in appearance, or losing flesh, get into a chronic state of disturbed health, manifested by nausea, and even dry retching, in the morning, loss of appetite, and impaired digestion; but, in particular, by a deranged and irritable state of the nervous system, and by watchfulness. This forms one of the most distressing symptoms, and the patient generally complains that he cannot get any sound and refreshing sleep, that he lays awake for hours together, and that when he slumbers his rest is disturbed by disagreeable dreams, or broken by slight noises. How are you to treat this affection? I can give you a valuable remedy for this deranged state of constitution—one which I have often tried, and which, from experience, I can strongly recommend. It is a mixture, composed of tincture of Columbo, quassia, gentian, and bark—say an ounce of each; and to this is added a grain, or even two, of morphia. A compound tincture, somewhat analogous to this, is much in use among military gentlemen and others, who have resided for a considerable time in the Indies, where, from the heat of the climate, and the prevalence of intemperate habits, the stomach becomes relaxed and the nervous system irritable, so as to represent, in a minor degree, the symptoms which characterize delirium tremens. You perceive I combine several tonics to form this mixture, because they are well known to produce a more beneficial effect when combined than when administered singly; and I add to these a narcotic, which has the property of allaying nervous excitement without deranging the intestinal canal. The dose of this mixture is a tea-spoonful three or four times a day, and the best time for taking it is about an hour before meals.



It gradually removes the nausea and debility of stomach, lessens nervous irritability and watchfulness, and, with a proper and well-regulated diet, and attention to the state of the bowels, I have seen it produce excellent effects. In such persons much benefit is derived from the use of the tepid shower-bath.

Fever is another disease in which sleeplessness is a symptom, frequently of an unmanageable character, and pregnant with danger to the patient. You witnessed this in the case of the boy who lies in the small Fever Ward, next to the man who is at present labouring under general arthritis. This boy had fever of a mild description, and unattended by any bad symptoms. His case scarcely required any attention, and he had almost arrived at a state of convalescence without the aid of medicine, when he began to lose his rest, and absolutely became sleepless for several nights. I beg your attention to this case, for many reasons. In the first place you have seen that we tried many remedies without success, and afterwards fortunately hit on one which answered our purpose completely. Let us examine the nature of the medicines prescribed, and our reasons for giving them.

In the first place, we gave, as in the case of jaundice, an aperient, followed by a full dose of black drop. It failed in producing any sleep; we repeated it a second and a third time, but without the slightest benefit. I then remarked to the class, that as I had noticed the good effects resulting from a combination of tartar emetic and opium in the case of delirium tremens, where opium alone failed in procuring sleep, it would be proper to give this remedy a trial. I observed at the same time, that I was convinced that the preparations of anatomy have a distinct narcotic effect, and that I had seen patients in fever whose watchfulness had been removed by antimony given in the form of tartar emetic or James's powder. I said that it was my firm impression that tartar emetic, along with its other effects, exerts a decided narcotic influence on the system, and that it is this which makes it so valuable a remedy in treating the sleeplessness of fever and delirium tremens. Hence I have been in the habit of giving tartar emetic combined with opium in fever, and, I must add, with very great success. Our predecessors were much in the habit of using antimonial mixtures in the treatment of fever, and they did this because they knew, by experience, that these remedies worked well. It is at present too much the fashion to decry their practice, and in this instance I think with very little justice.

In this boy's case, however, the combination of tartar emetic and opium did not succeed in producing sleep. Having thus failed in our first and second attempts, we had recourse to the liquor muriatis morphiæ, a preparation first brought into use by

Dr. Christison, and which, in the form usually employed, is equal in strength to laudanum. It is an exceedingly valuable preparation for many reasons, and one which has the strongest claims to your notice. Being of the same strength as laudanum, it saves the trouble of learning and remembering new doses, and, in addition to this, it possesses the more important advantages of inducing sleep with more certainty, and not acting as an astringent on the bowels, or affecting the head so frequently as laudanum. You observe that I say *so frequently*; I do so because cases now and then occur in which even moderate doses of the liquor of the muriate of morphia produce quite as much head-ache as laudanum. I prescribed the former in doses of fifteen drops every six hours, so as to give sixty drops in the day, and continued this practice for two days, but without the slightest effect. Here you see three modes of inducing sleep completely failed. The boy remained for a few days without taking any medicine, and then we made another attempt, which was more successful. We first prescribed a purgative enema, and, after this had operated, he was ordered an opiate injection, consisting of four ounces of mucilage of starch, and half a drachm of laudanum. He fell asleep shortly after using the opiate injection, and did not awake until the next morning. The following night the opiate was repeated in the same form and with equal success; convalescence went on rapidly, and the boy's health is now quite re-established.

Here, then, is a singular fact, attested by this case, that opiates in the form of injection will succeed in producing sleep, where they have completely failed when administered even in large and repeated doses by the mouth. Baron Dupuytren was the first who made this important observation, and proved that narcotics applied to the mucous surface of the rectum exercise a powerful influence on the nervous system, always equal, and very often superior, to the effect produced by taking them into the stomach. He maintains, that in delirium traumaticum and delirium tremens a certain quantity of opium, when prescribed in the form of enema, will act with more decided effect in allaying nervous excitement, than the same or even a larger quantity when taken by the mouth. I have no hesitation in giving full credit to this assertion, as the results of my experience tend strongly to confirm its truth. I have, not long since, published in the *Dublin Medical Journal*, the case of a patient in Sir P. Dun's Hospital, who was reduced to the last stage of debility and emaciation from the combined effects of mercury and syphilis. The torture which this man endured from nocturnal pains and a total deprivation of sleep, was such that he swallowed enormous doses of opium: in fact, he had, previously to his admission into Sir P. Dun's Hospital, exhausted all his means in purchasing

opium. While in hospital he used to take 150 drops of black drop in the course of a day, and yet notwithstanding these excessive doses, he could only get a few minutes unrefreshing slumber. After some time I changed the plan of treatment, and had the black drops administered in the form of enema. It succeeded in producing a decided soporific effect, and in a short time he was able to enjoy a sufficient quantity of repose, from taking only one tenth of the quantity used by the month. I have also, in the same paper, adverted to the case of a medical gentleman who laboured under an affection of his joints, which was accompanied by spasms of the limbs, and most excruciating pains. His agony was so intense that he used to swallow grain after grain of opium, until he had taken to the amount of thirty or forty grains, with the view of procuring some alleviation of his sufferings. He was prevailed on to give up altogether the use of opium by the mouth, and employ it in the form of enema, which he did with the most striking advantage, the quantity which succeeded in giving relief in this way being scarcely the twentieth part of what he ordinarily used.

It is unnecessary for me to enter here into any discussion with respect to the nature and treatment of delirium traumaticum, and the sleeplessness which always accompanies it, as you will find this subject very ably treated in M. Dupuytren's works, and in a very instructive and elegant lecture delivered by Mr. Cramp-ton (the Surgeon General) in this hospital, and published in the last volume of the *London Medical and Surgical Journal*. There is, however, one kind of sleeplessness arising from irritation of the skin produced by blisters, which frequently assumes a very serious character, and on which it may be necessary to offer a few observations, as the subject has not been noticed sufficiently by practical writers. Trifling as the irritation resulting from a blister may seem, yet, under circumstances, it is a symptom of highly dangerous aspect, and becomes a source of just alarm. I have witnessed the loss of some lives from this cause, and many patients have, to my knowledge, been rescued from impending danger, by an early and proper share of attention being directed to its phenomena and treatment.

The bad effects on the nervous system occasionally produced by the application of blisters, are somewhat analogous to those which result from wounds and other external injuries, and to be accounted for on the same principle. Wounds and injuries sometimes make an impression on the nervous system, by no means proportioned to the importance of the injured organ to life, or to the extent of the mischief. An injury produced by a body which strikes the sentient extremities of the nerves with great force, will sometimes produce very remarkable effects on the system. Thus a musket ball striking a limb may, without



wounding any great artery or nerve, or destroying any part of importance to life, produce a train of nervous symptoms of an extraordinary character. The person, without feeling much pain, and scarcely knowing that he has been wounded, without being terrified, or having his imagination excited by any apprehended dangers, turns pale, gets a tendency to faint, and sometimes actually dies from the impression made on the nervous system. In the same way an external injury reacting on the nerves may bring on high mental excitement, delirium, and a total privation of sleep, as we exemplified in delirium traumaticum. I mention this with the view of establishing the proposition that impressions made on the sentient extremities of the nerves are sometimes reflected on the nervous centres, producing the most alarming effects. In this way we can understand how the irritation of blisters may produce sleeplessness, mental aberration, and a train of symptoms analogous to those which characterize delirium traumaticum.

The delirium and sleeplessness arising from irritation of blisters is by no means an uncommon disease. I have seen many examples of it in private practice, and I am anxious that you should be acquainted with its nature and treatment. It is generally met with in cases of children, in whom the cutaneous surface is extremely tender and irritable. I could relate several instances in which I have been called on to visit children labouring under fever, where symptoms of high nervous excitement were present, and where I found the little patients delirious, screaming, and perfectly sleepless from this cause. I have found this alarming affection generally occurring at an advanced stage of fever, and exhibiting a train of symptoms which closely resemble hydrocephalus. I have observed that after the application of a blister to relieve some suspected cerebral, or abdominal, or thoracic affection, jactitation, restlessness, constant application of the hand to the head, and delirium have appeared, and that these symptoms had been mistaken for incipient cerebritis or hydrocephalus, and treated with leeches and purgatives. When the blister had been applied to the nape of the neck, the soreness and irritation of the skin on that part *cause the child to roll its head from side to side on the pillow, with that peculiar motion and scream supposed to prove to a demonstration the existence of hydrocephalus.* I have learned also, that the above measures, so far from giving relief, have only tended to produce an exacerbation of the disease, and that the medical attendant has given up the case in despair. Now, gentlemen, if called to such a case what should be your practice? In four cases of this kind I gave my opinion frankly to the medical attendant, and told him that he was pursuing a wrong course, that the disease was analogous to delirium traumaticum, and not to be treated by leeches

or purgatives, and least of all by blisters. I observed to him that these symptoms had made their appearance shortly after the child had been blistered for suspected disease of the belly, or head, or chest; and that it was useless to attempt to remove the disease by leeches, or purgatives, or blisters. The remedy I always proposed was opium, and it was acknowledged in four or five cases, that this remedy had succeeded not merely in relieving the existing symptom, but in saving the patient's life. In such cases, particularly in young children, the opium must be given in small but frequently repeated doses, so as to ensure its energetic, but safe action, and the greatest care must be taken to soothe the irritated portion of the skin, by ointments, poultices, &c., *while untwearied diligence must be bestowed upon the task of preventing the child from scratching the blistered surface.* To effect this the child's hands must be muffled in appropriate gloves, and must be secured in the sleeves of a shirt made for the purpose.

I beg your attention still further to this subject of sleeplessness and delirium. I wish to mention the case of a gentleman who was a pupil of mine. This gentleman studied hard, attended lectures regularly, and was constantly in the dissecting room. While thus occupied, he happened to wound one of his toes in paring a corn, and afterwards wore a tight shoe on the injured foot. A small imperfect abscess formed in the situation of the corn, which was opened by one of his fellow students; the incision gave very great pain, and was not followed by any discharge of matter. Next day he was feverish, and the lymphatics of the injured limb became extensively engaged, the inflammation ascending towards the gland of the groin, and having a tendency to form a chain of insulated patches in different parts of the leg and thigh along the course of the lymphatics. This you will generally find to be the case in inflammatory affections of the lymphatics; the inflammation is seldom continuous, but, in the majority of cases, is developed at certain insulated points, where small diffuse suppurations form very rapidly. After a few days, this young gentleman's fever increased to an alarming height; he became completely sleepless, and had incessant delirium. He was purged briskly, leeches extensively and repeatedly, his head shaved, and cold applications so constantly applied, that he appeared half drowned and collapsed. Notwithstanding this very active treatment, not the slightest relief was obtained; neither were the symptoms mitigated by incisions made in the insulated patches for the purpose of evacuating matter; the sleeplessness continued, and the delirium was as wild as ever. I saw him on the seventh or eight day, when all antiphlogistic measures had failed, and his friends were quite in despair. On being asked my opinion, I stated that I looked upon

the case as one of delirium, not proceeding from any determination to the head or inflammation of the brain, but depending on a cause analogous to those which produce delirium traumaticum, and that instead of antiphlogistics I would recommend a large dose of opium and some porter to be immediately given. Mr. Cusack, who visited the patient after me, concurred in this view, and a full opiate was administered in repeated doses. It succeeded in producing sleep and tranquillizing the nervous excitement. I may here observe that a few days afterwards this gentleman had a return of the symptoms of cerebral disturbance with sleeplessness, in consequence of omitting his opiate, and that the opiate and porter were again administered, and again succeeded in removing the delirium and watchfulness. By perseverance in the use of the same means, the disease was completely removed, and convalescence established.

The last kind of sleeplessness to which I shall direct your attention, is that which is frequently met with in persons of a nervous and irritable disposition, in hypochondriacs, and hysterical females. You will find such persons, although of active habits, and with tolerable appetites, complaining of a total privation of their natural rest, and it is astonishing to think how long they may continue subject to this harrassing watchfulness. I have frequently observed this affection among females of nervous habit, who possessed strong feelings of attachment to the interest and welfare of their families, and who were remarkable for an exemplary and over anxious discharge of their domestic duties. It is also very often met with in the upper classes of life, where the susceptibility of the nervous excitement is morbidly increased by fashionable habits. I shall not enter into the various moral causes which tend to produce this state of the nervous system, and will content myself for the present with giving you some hints for the treatment of this obscure affection. As yet I have not any distinct and accurate notions of the disease, and can only guess at the treatment, but this much I may state, that such cases are not to be cured by the means which I have already detailed. If they are to be cured by any means, I think it is by antispasmodics, and remedies which have a gently stimulant, and, if I may so express myself, alternative effect on the nervous system. I have cured two cases of this kind by musk and assafoetida, where every other remedy had failed. To one of these I was called by my friend, Dr. Neason Adams; the patient was a lady of delicate constitution and hysterical habit; she was emaciated, and suffered from a total loss of rest, but had had no other disease. All kinds of narcotics had been tried unsuccessfully, and opium in all its forms had failed in procuring sleep. I advised the use of musk in doses of a grain every second hour, and this means proved eminently successful. In another case I succeeded by



administering the same remedy in combination with assafoetida. I have also remarked that assafoetida alone, given in doses of two or three grains three times a day, has very considerable effect in calming nervous irritation of this description, and restoring the patient to the enjoyment of more prolonged and refreshing sleep. In all such cases the physician must be most careful to have the appearance of not thinking the loss of sleep as a matter of much consequence, and the family of the patient must be directed to speak as little about the matter in his presence as possible;—nay, so powerful is the operation of moral impressions, that in one case which I attended along with Mr. Halahan, I succeeded in procuring sleep by ordering a musk pill to be given every second hour night and day, and by desiring the patient to be awakened, should she be asleep, at the time the pill was to be taken. I laid great stress on the importance of so proceeding, and thereby produced so strong an effect on the patient's mind, and inspired so great a confidence in the efficacy of the medicine, that she went to bed, not so much afraid of lying awake as afraid of being asleep at the hours when she ought to take a pill. The idea which had hitherto fixedly occupied her mind was displaced by a new impression, and relief was obtained the very first night.

To conclude, gentlemen, I may observe that sleeplessness in a chronic form is often produced by dyspepsia, and can only be relieved by the means suited to indigestion. Here it is that small doses of blue pill and tonic purgatives are of infinite service, combined with change of air, of scene, and an appropriate diet. In many females, sleeplessness is combined with menstrual irregularity, and can only be cured by means calculated to invigorate the health and restore the catamenial discharge to its natural periods and quantity, for the nervous system suffers equally whether they be suppressed or overabundant. It is singular how long sleeplessness often continues in chlorosis without inducing those serious consequences that are produced by this symptom in other morbid states of the system. In such cases much is sometimes accomplished by means of the common preparations of morphia, or by the use of Hoffman's liquor (liquor æthereus oleosus), camphor and other medicines that act upon the nervous system. It must be confessed, however, that these and every other expedient to obtain sleep often fail in chlorotic and hysterical females, in whom relief is only obtained by a gradual improvement of the general health and menstrual function.—*London Med. and Surg. Journal*, 21st March, 1835.

*Abstract of the Report of M. DESPORTES on the Service of the Salpêtrière and Bicêtre Lunatic Hospitals.*

The work of M. Desportes consists of two sections. The first exhibits a series of eighteen statistical tables, giving an account of the number of patients for each year, the name or character of each form of the disease, the occupation of the patient, the causes of the insanity, the relapses, the length of time each patient was under treatment, and lastly the issue of each case. The second comprises the practical and philosophical deductions which may be drawn from these tables.

These tables are arranged in three classes. In the first class are grouped the cases, which were observed during the years 1825, 6, and 7; in the second, those observed in the year 1828, 9, and 30, and in the last, those observed in the following years, 1831-2-3.

*Number of Patients admitted, discharged, and cured, during Nine Years from 1825 to 1833 inclusive.*

Admitted .....	8,272	lunatics.
Discharged cured .....	2,763	
not cured .....	1,863	
Dead .....	3,854	

The relative mortality to the number of cases admitted may appear at first sight, to be extremely high; but we are to remember, "*que la mort frappe surtout les incurables.*"

The number of admissions during the last triennial period was greater, than in either of the preceeding periods. The cause of this increase is most probably to be found in the agitation of the public mind induced by the revolution of July, 1831. In the following year too, the epoch of the cholera, there were more admissions than usual. A similar increase in admissions was noticed also in private lunatic establishments, during these two years. In an article published by Dr. Belhomme in the bulletins of the Medico-practical Society, he has particularly alluded to the influence of stirring political and public events on the developement of insanity. "It seems to me," says he, "well established, that not only great political events exert an influence on the developement of insanity, but also that the number of insane persons must necessarily have increased in France during the last forty years, in consequence of the violent commotions, which have succeeded each other during that period. That such has been the case, is clearly proved by the uniform increase of admissions into our great lunatic establishments after any violent excitement of the public mind.

During the nine years, to which the report of M. Desportes alludes, the number of admissions of female patients has been more numerous by about one-fourth.

M. Desportes observes that, by a singular coincidence, the number of insane patients under treatment and in a state of convalescence, which amounted to 318 on the 31st December, 1827, and to 3,127 on the 31st December, 1830, was exactly 318 on the 31st December, 1833.

In what months of the year have the admissions been most numerous? The following is a table in M. Desportes' report. Of 8,272 admissions during nine years, there were—

281	during June.
268	..... July.
255	..... May.
237	..... April.

From this table it would appear that the month of June, when the hot season commences, is the period of the aggravation of insanity.

Now as to the influence of the weather on the curability of the patients, we have the following data:—

Of the 8,279 patients, the months in which there were the greatest number of cures, were—

1st Series.	
In March	.... 36.
October	.... 44.
June	.... 43.
August	.... 42.
May	.... 42.

2d Series.	
In October	.... 40.
July	..... 44.
August	.... 47.
June	..... 48.

In other months the cures were less numerous.

3d Series.	
In September	.. 76.
February	.. 59.
May	..... 56.
July	..... 58.
August	.... 60.
October	.... 67.

We see by these tables, that it is at the trimestral epoches, which are marked by a change of season, that the cures have been most numerous; and especially in the month of October, in which alone there were 151 cures.

M. Desportes furnishes us with the following average relative to the cures effected.

First Series.	
Of 2956 there were 881 cured—1 in 335	
Second Series.	
Of 2869 there were 884 cured—1 in 324	
Third Series.	
Of 3354 there were 962 cured—1 in 361	



We are next informed that the female patients were kept longer in the hospitals than the males. The reason of this is, that the former may be more effectually and permanently cured. The men, having more means of subsistence, are of themselves generally more anxious to be discharged, when they once begin to feel themselves better. But it may be with propriety argued against this plan, that the danger of relapse must be the greater; and such, in truth, we find it to be the case.

Relapses are more frequent among the men than among the women. The following are the results of M. Desportes' report. In the first series, mentioned above, there was one relapse in every 12 men; whereas among the women there was one in every 16. In the second series, the proportion was one in every 10 among the men; and one in every 13 among the women. In the third series, the proportion was one in every 19 among the former; and among the latter one in every 22. He attributes this difference, in a certain degree at least, to the greater irregularity of life among the men, than among the women.

M. Belhomme is not quite inclined to agree with M. Desportes in this particular. He attempts to explain the difference by alluding to the difference in the cause and in the character of insanity among the two sexes. Among men, he says, it is most frequently idiopathic; whereas among the women, it is much more often merely sympathetic. Now the former, or the idiopathic insanity, is very frequently associated with lesions of the encephalon; while in the sympathetic form of the disease, there is generally no organic mischief, but only a morbidly excited state of the nervous system.

He adduces, as a proof of the correctness of these statements, that paralysis is much more frequent among insane male than female patients. This reasoning is certainly very plausible, and confirms, to a certain extent, the opinion of M. Belhomme, that idiopathic insanity affects men rather than women. We are thus furnished with a satisfactory explanation of the greater frequency of relapses among the male patients.

The following results, as to the mortality of the insane patients, are afforded us by M. Desportes' memoir. In the first series, there was one death in every six of the men, and one in every ten of the women. In the second and third series, the advantage is still more decided in favour of the women. The medium age of the deceased was, in the first series, between 40 and 50 among the men, and between 50 and 51 among the women: in the second series, the medium age among the men was 48 years, and among the women between 53 and 54; and in the third series, it was between 47 and 48 among the former, and between 50 and 51 among the latter.

As to the months in which the mortality chiefly occurred, January seems to have been the most fatal.

The observation of other physicians agrees with this statement. The severe cold of winter appears to be very hurtful to the insane.

M. Desportes next proceeds to give an analysis of the occupations of the insane, their ages, and of the diseases from which the patients usually died.

The following table presents us with a view of the ages of 8272 patients admitted during nine years.

From 10 to 19 years of age	626
— 20 to 29 .....	1568
— 30 to 39 .....	2024
— 40 to 49 .....	1683
— 50 to 59 .....	1051
— 60 to 69 .....	782
— 70 to 79 .....	484
— 80 to 90 .....	8
— 90 to 99 .....	2
Age unknown .....	15

The greatest number, therefore, was from 30 to 39 years of age.

The professions or occupations also seem to have a very marked influence on the developement of insanity.

It has been remarked by many observers, that there are always a number of insane sent from the army to the public lunatic hospitals. All persons too who have been subjected to strong mental or moral excitement, as love, ambition or interest; merchants who have suffered reverses of fortune, or persons who have left off business, without betaking themselves to some active employment, are very frequently the victims of derangement.

The following table of the occupations of the patients, whom M. Desportes examined, may be interesting.

Among the male patients there were

445	day-labourers,
124	tailors,
161	shoe-makers,
101	cabinet-makers,
81	masons,
97	clerks,
62	domestic servants,
17	washermen,
1	embroiderer,
23	cooks,
1082	occupations unknown.

Among the women, there were—

921	semistresses,
397	domestic servants,
503	day-work-women,
188	washerwomen,
133	embroiderers,
88	cooks,
50	shoemakers,
339	occupations unknown.

The great frequency of insanity among females, who have been milliners and semistresses, is perhaps not to be wondered

at, when we remember that so many of these poor creatures are, from their personal charms and other circumstances, more exposed than others of their sex to seduction and ultimately to destitution and poverty. The grief which follows, their anxiety and distress if they become mothers, the anguish of disappointment, are unquestionably the causes of the frequent occurrence of insanity among them.

M. Desportes remarks that insanity is more frequent among female, than among male *celibataries*. The following statement is very interesting, as it shews, that the unmarried life is decidedly more exposed to the misery of mental derangement, than the "dual state," as the poet Cowper terms matrimony.

The *celibataries* of the two sexes were in the proportion of 47:16 in every hundred cases admitted into the hospitals; married persons in the proportion only of 3:55 in the 100; widowers and widows in the proportion of 13:27 in the 100; and those who had been divorced, or whose civil condition was unknown, in the proportion of 4:7.

The most frequent and powerful predisposing and exciting causes of insanity, among the patients examined by M. Desportes, will be seen by the following table:—

*Predisposing Causes.*

Hereditary predisposition in .....	736 cases.
Defect of intellectual developement in .....	642
Premature or natural old age .....	753

*Physical Causes.*

Cerebral congestions or hæmorrhages, inducing paralysis or delirium ....	656
Epilepsy and convulsions .....	492
Efforts of menstruation, critical period of life .....	383
Consequences of parturition .....	218
Pregnancy .....	48
Hysteria .....	100
Abuse of spirituous liquors .....	414
Poverty and destitution .....	100
Syphilitic disease .....	51
Misconduct and debauchery .....	216

*Moral Causes.*

Domestic distress .....	392
Reverses of fortune .....	150
Ambition .....	139
Disappointed love .....	114
Fright .....	124
Unknown causes .....	1575

The influence of hereditary predisposition is strongly shewn by the preceding table. The number of patients, so situated, amounts to an eleventh of the whole number of admissions, viz., 8972. The author very properly alludes to the great impropriety of marriages in certain families; but it is very doubtful whether most people will be willing to adopt his advice, "less medicin seules peuvent etre consultes avec avantage dans ces sortes de cas."



Dr. Belhomme directs the attention of his readers particularly to the marked influence of the uterine functions, as one of the most frequent causes of insanity among females. The above table shews that not fewer than 982 cases are attributable either to the efforts of menstruation, the suppression of the catamenia, their cessation, or to pregnancy, the sequelæ of parturition, suckling, &c., or, lastly, to hysteria and other nervous affections, which are, more or less, obviously connected with the state of the uterus.

We shall now proceed to state the result of M. Desportes' inquiries as to the most frequent causes of death among insane patients.

1st Series, 1825-6-7, out of 1146 deaths,  
253 were caused by organic diseases of the encephalon,  
395 by organic diseases of the thoracic viscera,  
445 by organic disease of the abdominal viscera,  
108 by cachectic diseases.

2d Series, 1828-9-30, out of 1200 deaths,  
237 were caused by diseases of the encephalon,  
390 by diseases of the thoracic viscera,  
393 by diseases of the abdominal viscera,  
119 by cachectic diseases.

3d Series, 1831-2-3, out of 1408 deaths,  
270 were caused by diseases of the encephalon,  
468 by diseases of the thoracic viscera,  
485 by diseases of the abdominal viscera,  
158 by cachectic diseases. Hence there was a total of 760 deaths from encephalic disease, 1258 from thoracic, 1322 from abdominal, and 385 from cachectic disease.

It is however, more than probable that, in very many of the cases arranged under the thoracic and abdominal sections, there was co-existent cerebral disease—the cause of the insanity, although not of the fatal termination. The influence, which disease of other cavities has frequently on the state of the cerebral functions, is strikingly exemplified in many cases of insanity. M. Belhomme alludes to several cases in illustration of this remark, and more particularly to that of a phthisical patient, in whom the paroxysms of madness regularly alternated with the free flow of the purulent secretion, or its suppression.

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On account of our desire to get before the reader as much matter of practical bearing as possible, our *Periscope* and *Medical Intelligence* are necessarily omitted in the present No.—ED.

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## PART I.

### ORIGINAL COMMUNICATIONS.

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#### ARTICLE I.

*Surgical Cases.* By PAUL F. EVE, M. D., *Professor of Surgery in the Medical College of Georgia.*

#### SERIES NO. IV.

Case 1st. *Successful removal of a large Schirrous Tumour from the Neck, attached to the left Tonsil.* This operation was performed upon a negro man, named Middleton, brought to me by Dr. JOSEPH WARDLAW, a very intelligent and promising young physician of Abbeville village, S. C. A small tumour was observed on the left side of the neck several years ago, and which had resisted all kinds of treatment. Within the last few months, it had rapidly increased in size. When removed, I suppose it would have weighed nearly half a pound, the largest size schirrous tumours attain. The operation was performed in the Augusta hospital on the 1st December, 1837, in the presence of the medical students, and assisted by Drs. WARDLAW, ANTONY &c. The incision in the skin extended from about an inch below the left ear, and was continued for four inches obliquely downwards and forwards towards the thyroid gland.

By careful dissection, aided much by the light reflected from a mirror into the bottom of the wound, the tumour was finally detached from its connections to the surrounding tissues, the last divided being a fatty prolongation to the left tonsil. The left carotid and internal maxillary arteries, as well as the thyroid gland, were each exposed. The ligature was applied to but two arteries, one being the superior thyroideal. The lips of the wound were brought together by sutures, adhesive plasters and bandage. No untoward symptom occurred, the sutures were removed on the 7th, the sixth day after the operation, and the patient left the hospital on the 11th.

The following is an extract from a letter of Dr. WARDLAW, dated Abbeville C. H., Jan. 20th, 1838: "The boy Middleton, has entirely recovered, the wound healed very kindly, and has left a smooth and regular cicatrix. He is now in fine health, and greatly rejoices that he has gotten rid of 'the lump' as he terms it."

REMARKS. The ligature I employ is *animal*, made at the suggestion of Dr. JOHN BELLINGER of Charleston, of deer's sinew. I only employ them for *sutures* when I expect union by the first intention—applying in all cases *silk* ligatures for this purpose, when suppuration is apprehended, and for a very obvious reason.

Case 2d. *Extensive Injury of the Scalp, with compound and comminuted Fracture of both bones of the Fore-Arm—Amputation of the Arm—Recovery.* Henry, a boy about ten years old, and belonging to Dr. REID, of Abbeville district, So. Ca., while descending a very steep hill in the neighborhood of Augusta, was thrown from the driver's saddle of the left wheel horse, upon the ground which was gravelly, and by the upsetting of the wagon, was very seriously injured. His right fore-arm was fractured just below the elbow-joint, attended with laceration of the soft parts, both radius and ulna being broken comminutely, and the hemorrhage which occurred produced fainting. The scalp was also lacerated at three points, the temples and occiput, the cranium being exposed at these places.

This accident occurred about two miles from the city on the afternoon of the 10th November, 1837, and there was no perceptible re-action of the system until the next morning. In fact, expecting the injury would prove fatal, the hemorrhage from the



wounds was simply arrested by compression, and the case left pretty much in the hands of nature, assisting her only by a little wine and water. By careful watching, it was perceived that the system was reacting, and at 10 o'clock, it having been decided in consultation that it would be imprudent to attempt to save the right fore-arm, the arm just above the elbow was amputated in the presence of the medical class. The wounds of the scalp were cleansed of gravel, dirt, &c. and simple dressings applied to them. They all entirely healed, and on the 23d, the twelfth day after the amputation and dressing the injuries, Henry left for home.

Case 3d. *Piece of Percussion cap in the eye for two years—Sympathetic affection of the other eye—Evacuation of the humours of the diseased eye.*

Case 4th. *Piece of percussion cap in the eye, of recent occurrence—Section of cornea, obliterated pupil.*

These two cases produced by similar accidents, were each presented during the winter to the medical class of our College. The first occurred in a brother to a physician while gunning in Elbert County, in this State, and the patient never saw even the light from the moment of the injury. The piece of copper entered, or at least struck the schlerotica directly above the superior edge of the cornea and was never extracted. All ordinary means having failed to relieve the sufferings of the patient, and the other eye becoming affected sympathetically, he came to Augusta to consult me. A section of the cornea was proposed, to evacuate the humours, and with them probably the foreign irritating body, though the patient thought the piece of copper had not entered the eye, but simply struck it. On account of the great disorganization of the membranes and humours of the diseased organ, the operation was found very difficult of accomplishment, and exceeding painful. The humours were evacuated very slowly, encouraged secondly by poultices. It is believed the operation will secure the integrity of the left eye and relieve the patient of his sufferings in the right, which is all that was promised by it.

The second case was produced by a boy picking up a percussion cap in a store of the city, placing it upon an anvil and then striking it with a hammer. A piece of it penetrated the cornea, of the left eye just below the point where the knife is introduced in making a section for the extraction of the lens in cases

of cataract, and passed thence through the iris into the globe. The day after the accident, a section was made in the cornea as in the ordinary operation for opacity of the lens, with the view of extracting the foreign substance, and on completing it the lens immediately escaped. Whether this latter body or its capsule was injured by the piece of cap, it is impossible to say, it came however, through the pupil and section of the cornea, without any undue pressure upon the globe of the eye. Since the operation, the pupil has become obliterated, the iris being puckered up where the foreign body entered it, and has become adherent to the cornea. I know not if the piece of copper was extracted, it was not seen at any time. The other eye remains entire; the patient suffers now no pain whatever, and attends to his ordinary business.

Case 5th. *Gun-shot wound of the wrist-joint—Limb preserved.*—On the 20th of January last, a gentleman of this city while out gunning, in stepping over a fence with a double barrel gun, (percussion locks,) accidentally received a discharge in his left wrist-joint. As the thumb, fore-finger and middle finger, were uninjured, while the other two with the ulnar side (nearly the one half,) of the hand and wrist joint were dreadfully lacerated, it was determined in consultation, to attempt to save the limb, even with the risk of tetanus, and the certainty of articular inflammation. The ring and little fingers, with their metacarpal bones, and about one half of the two carpal rows, the unciforme, the pisiforme, cunciforme, and one half of the os magnum, were removed, (in presence of many of the students,) and the wound covered as far as it could be with the remaining integuments. The hand was placed upon a splint and first dressed with adhesive strips and simple cerate, and afterwards with chloride of lime. The inflammation in the joint ran its course without much suppuration, but it was not until the 29th of March that the case was dismissed. This I attributed to the constitution of the patient not being very good, and to the very cold and unpleasant weather during the time of his confinement.

I saw Mr. M. a few days since: he is fast recovering the use of his thumb and fore-finger, but the middle one is still very stiff. The patient is well pleased that the whole hand was not sacrificed.

Case 6th. *Aneurism from Anastomosis on the head—Successful excision of it.*—Peter, aged about 45 years, belonging

to Mr. ANGUS MARTIN, received three years ago, a blow over the left posterior inferior angle of the parietal bone of the cranium. Soon after this he discovered a small tumour which gradually increased to the size of a turkey egg, there being also a second one attached to it, about as large as a pigeon's egg. They were situated in the course of the occipital branch of the temporal artery. Being well covered by the scalp, no extraordinary pulsation was remarked in them. I was requested to remove them on account of their inconvenience and continual growth. In a hasty dissection of them in the anatomical theatre of the College, the patient having arrived after the hour appointed, the knife penetrated the largest tumour, when the blood gushed forth in a large stream. The finger of an assistant immediately controlled the hemorrhage, and the tumours were hastily removed, without of course cutting into them again. But two arteries required the ligature, and the wound healed rapidly. The tumours appeared to be made up of a congeries of dilated blood-vessels—emptied of blood, the two were scarcely larger than the end of the thumb.

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## ARTICLE II.

*Operations on the Eye by Professor DUGAS. Reported by W. H. ROBERT, M. D. late Demonstrator of Anatomy in the Medical College of Georgia.*

Affections of the eye may be either confined in their effects to the organ of vision, or extended by sympathy so as to implicate the general health. It therefore becomes necessary in the treatment of affections of this important organ to direct our attention not only to the eye itself, but also to the influence of the local disease, on parts more remote. By so doing, instances will occasionally be presented in which it will become the duty of Surgeon to remove the organ already incapacitated for vision, and even to destroy one not yet entirely lost, in order to render life



comfortable. These reflections are induced by recalling several operations I witnessed performed by Professor DUGAS, during the past year, and whose history I will briefly narrate.

Case 1. *Destruction of the Eye by Hooping-Cough.*—In April 1837, the daughter of Col. H. G. L., of Macon, about six years of age, was brought to this city and placed under the care of Dr. D. She had some years previously, when affected with the hooping-cough, and in a violent paroxysm, ruptured some of the blood-vessels within one eye, by which vision was entirely destroyed. From that time the eye gradually increased to double its natural size, became highly painful, protruded to such a degree as to prevent the closing of the eyelids, and was frequently attacked with intense inflammations, requiring the most energetic treatment for its subjection. The other eye, sympathizing strongly with it, was also occasionally affected with symptoms of ophthalmia, and the child's general health was continually kept delicate. There being no other alternative than the removal of the diseased organ, either in totality or in part, Dr. D. determined to evacuate its contents by excising its anterior surface. He accordingly passed a tenaculum through the cornea, the whole of which was then removed with a straight bistouri, without touching the schlerotica. Dr. D. prefers the use of the tenaculum to either of the methods usually recommended. The aqueous humour was found very abundant, the lens reduced to a soft pulp, and the vitriour humours amalgamated with a dark bloody matter. About one half of the contents immediately flowed out; the balance gradually escaped in the course of a few days, and in a few weeks the case was discharged. The coats of the eye had contracted and cicatrized, leaving a small tubercle, to which may be appended an artificial eye. No unpleasant effects supervened, and, save the first and second nights, the patient had but little pain.

Case 2nd. *Destruction of the Eye by Purulent Ophthalmia.*—A negro child about four years of age, belonging to Col. J. McK. had in her infancy suffered a severe attack of purulent ophthalmia, which terminated in opacity of the cornea, and consequent loss of sight. The eye increased in volume enormously, and presented a similar appearance to that in the above case. The child was brought to town in August 1837, and was subjected by Dr. D. to excision of the cornea, and evacuation of the

humour. No unpleasant symptoms supervened, and the patient was sent home in a few weeks perfectly well.

Case 3d. *Staphyloma following acute Ophthalmia.*—In this individual, (Susan, a colored woman about thirty years of age, belonging to S. H., Esq.) after a violent and obstinate attack of acute ophthalmia, occurring without evident cause, was presented to Dr. D., who found vision entirely destroyed, the body of the eye about the natural size, but the cornea protruding like a nipple between the eyelids. The patient suffered almost continual pain in the eye, which frequently extended to the divisions of the fifth pair of nerves, at their exit from the supra and infra orbital foramina. Inflammation would frequently be developed in the conjunctiva of the affected eye, and implicate by sympathy, that of the other.

On the 20th of November 1837, Dr. D. operated in like manner as in the two above case, and with similar and complete success.

Case 4th. *Ossification of the Capsule of the Lens, Chronic Iritis, &c.* Nace, a field hand, about twenty-five years of age, the property of J. M., Esq. was sent to Dr. D. in January 1838. He had been incapacitated for work during the last three or four years by pain in one eye, as well as above and below the orbit, which occasionally became excruciating; light was utterly insupportable, and the conjunctiva was frequently much inflamed and infiltrated, at which times the other eye would become more or less red and watry. Dr. D. found him in the following condition: size of the globe normal; cornea perfectly transparent and very slightly flattened when compared with the other; conjunctiva much injected; lens opaque and white; pupil extremely contracted and unchanged by alternate exposure to light and darkness, although light was extremely painful; secretion of tears profuse whenever the lids were separated; the pain such as scarcely to permit sleep at night.

Leeches, general bleeding, blisters, poultices, mercurials, iodine, &c. had been used without relief. Dr. D. now applied belladonna to the eye, in order to ascertain whether the iris was attached to the capsule of the lens. It was repeatedly applied without occasioning the slightest dilatation of the pupil. What was to be done in such a case? To persist in the use of medicinal preparations promised nothing; to operate for cataract, either

by depression or extraction, when the iris was adherent, and the fifth nerve as well as the delicate tissues to which it was distributed, had been affected several years, was equally unadvisable. Yet the patient was unwilling to endure his suffering any longer, if possible to avoid it, and, moreover, there was some danger of the other eye becoming impaired by further delay. The only alternative was the destruction of the eye. Dr. D. accordingly, on the 20th January, removed the cornea. The aqueous humour escaped, but the lens still remaining, a cataract needle was introduced to break up its attachments. The iris adhered firmly to the capsule of the lens, the anterior portion of which was completely ossified, and the posterior considerably thickened and opaque. The lens itself was of a pulpy consistence. The vitreous humours escaped, the eye sunk, and cicatrization readily took place without further trouble. The servant in a few weeks returned to his usual labour, and has not since experienced any uneasiness in either eye.

It will be remembered that in this case, vision was not entirely lost, for light was always perceived and attended with pain; yet the operation was determined on as the only means which promised comfort to the patient, and the removal the danger of losing the other eye. It is true the ossification of the capsule of the lens had not been recognized, nor are there any indications by which such a state can be distinguished from ordinary opacity of this membrane. The existance of the ossification served however, to confirm the correctness of the practice. It cannot be denied that much circumspection should be exercised in determining on the destruction of so important an organ, yet the case before us is unquestionably one in which such practice was the legitimate deduction of sound principles, and the result has been the restoration of ease to one who had led a wretched existence during the several preceding years.

Before closing this paper, I will take occasion to relate the history of a case of "Congenital Cataract," in which Dr. D. operated successfully on both eyes. The subject was a negro child about three years of age, (the property of Maj. W. P. D.,) who was born with a cataract in each eye, and consequently had never seen. The pupils contracted readily when exposed to a strong light, and the child was in fine health. A mild cathartic and the application of belladonna as usual, were the only prepa-



ratory means used, and on the 8th of June 1836, Dr. D. operated on the left eye. The cataract was found fluid, the capsule was thoroughly broken up, and the needle withdrawn. With the exception of a slight conjunctivitis, which readily yielded to laxatives, saturnine lotions, &c. there were no unpleasant effects. Belladonna was occasionally applied in order to prevent the possibility of adhesion of the iris.

The right eye was operated on, on the 21st of the same month; the lens was here found soft, and was readily crushed with its capsule, and portions pressed into the anterior chamber of the eye. On the 5th day no inflammation had supervened. Absorption was still proceeding rapidly in the left eye, and the child was sent back to the country. Her vision continued to improve as absorption advanced, she was soon enabled to run about without a guide, and to amuse herself with playthings. She now can readily see and pick up a pin thrown to her; thus evincing as complete a restoration of vision as is ever obtained under similar circumstances.

One of the most inveterate obstacles to the use of the new function, was a spasmodic and incessant agitation or vascillation of the eyes, which prevented the child from directing or fixing them on any object. Never having been before subjected to the influence of the will, the muscles of the eye had assumed this kind of involuntary action, and it was not without the utmost difficulty, and the lapse of many months, that volition assumed its empire over them. Even to this day, (two years after the operation,) it has to contend with the spasmodic action, although it more readily vanquishes it than formerly. It is presumed that the ascendancy of volition will ultimately be complete.

## PART II.

## REVIEWS AND EXTRACTS.

*Inductive Medicine.*

We regret that Dr. CRAIGIE'S "Elements of the Practice of Physic, presenting a view of the present state of special Pathology and Therapeutics," a large and valuable octavo volume has not yet come to hand. From the reviews of the work, Dr. CRAIGIE appears to be a talented and independant writer, and, so far as his subject allows, original. We extract from the Medico-Chirurgical, the following definitions, which seem clear and explicit, and calculated to subserve the purpose of *Inductive Medicine*, and prove its handmaids in the detection of the elements of sound reasoning, and in leading to clear and accurate conclusions.

MEDICINE he defines to be "the art of distinguishing, preventing, and curing diseases."

DISEASE, he makes "to consist in that change in the properties, or structure of any tissue or organ, which renders it unfit for the performance of its actions or functions, according to the laws of the healthy frame."

ETIOLOGY, is "*the doctrine of causes.*" The formation of diseases is understood to depend on the presence, or previous operation of certain circumstance which are classed together under the general name of causes. The department which undertakes to investigate the nature and operation of these agents is denominated *Etiology*."

REMOTE CAUSES are "all those circumstances which are observed to produce in animal bodies, sickness or morbid action. These are distinguished into *predisposing causes*, or those which induce a disposition to disease; and *exciting*, or *occasional causes*, or those which, when the disposition is already established, rouse it into action and give rise to actual disease." The former, Dr.

JOHNSON observes, include what are denominated *internal* causes, and the diatheses morbosæ of the schools. The latter comprise "all those circumstances or accidents, the operation of which upon the frame is followed, more or less directly, by the establishment of definite morbid action." Every occasional or external cause, may, by habitual, continued or repeated operation, give rise to effects which constitute morbid predisposition, and hence may become at once an occasional, exciting or external cause, and a predisposing or internal one. The best examples of the combination are presented by the effects of terrestrial or miasmatic emanations of marshy, insalubrious and malarial districts, the effects of residence in tropical and hot climates, whilst the solar heat is intense; and the effects of the habitual use of spirituous, vinous and fermented liquors." Dr. C. thinks it would be best to banish the term "*proximate cause* of disease" from the usage of physicians, and to substitute in its place the term "*pathological cause*, or simply *pathological character of the disease*, which would have been a definite signification." To this Dr. JOHNSON objects.—"If," says Dr. J. "causes are divided into remote and proximate, the change of terms by the banishment of one and the substitution of another, does not render the signification one whit less vague and erroneous, &c." But it appears to us that Dr. J. begs the question in saying "if causes are divided into *remote and proximate*." Dr. C. distinctly proposes to banish the term *proximate* from the usages of physicians, and does *not* divide into remote and *proximate*, and doubtless for very good reasons. Dr. J. asks "if there are no proximate causes of disease then?" certainly there are proximate causes of all events. That which is without the intervention of any other phenomenon between it and the effect is, in truth, the proximate cause, and there should never have been any other difficulty in settling this matter, but that of ascertaining the fact of causation; nor would there ever have been, but for the folly of going into the facts of those changes of properties, or structure of organs or tissues which render them unfit for the performance of their functions according to the laws of health.

It is true that the whole train of causation and of morbid phenomena, is but a concatenation of cause and effect; and in the phenomena of disease, whilst one phenomenon is the effect of a



cause of disease, it may itself also be a cause of another link in the chain of morbid phenomena. But it is true, that the moment that structure or function deviates from the true physiological state or kind, that moment is disorder or disease produced, and is not to be considered, in distinguishing the *proximate cause* of an event called disease, as *the cause*, but as the *primary effect* of the cause. Let us illustrate this idea a little farther. A man resides for a sufficient time in a malarial district, and becomes predisposed to fever. The *predisposition alone* is not apt to produce fever. But if, with this predisposition, he be exposed to cold, fever is produced, and of that type to which the predisposing cause disposed him. In this case, the cold is the occasional, exciting, or if Dr. JOHNSON please, the *proximate cause* of the disease, or whole train of morbid phenomena which follow under the name of bilious fever, without the intervention of any other cause, or even obvious phenomenon. The spasm of the capillaries, if such be the first obvious morbid phenomenon or effect, is not therefore the *proximate cause*, as has been said, but is in truth the *primary effect*—the first known link in the chain of actual morbid phenomena. The cold, is, in this case, actually *proxime*, and therefore is the cause of the next, and through it the succeeding phenomena which are the disease itself, consisting of the various derangements of functions, &c. in the system. But the character of these derangements will be modified by the peculiarities of the existing predisposition. If there be a bilious predisposition, *bilious* will be the character of the succeeding disease, unless there be other modifiers concerned, in which case, these will also share influence in the effects. Thus if the man be greatly predisposed to bilious disease, with a slight cold as an occasional cause, he has a fever decidedly, or entirely of bilious type, and more or less malignant or benign, according to the circumstances of the predisposition, because effects are proportionate to causation. But if, labouring more or less under this predisposition, he suffer violent effects from cold as an occasional cause of disease, he will probably suffer an inflammatory attack, and if slightly, or not at all predisposed to bilious disease, the occasional cause, cold, will be found to have produced the *inflammatory* fever unmodified, or not materially modified by any other predisposition than that which belongs to

the true physiological state. Hence the difference in the prevailing diseases of summer, autumn, winter and spring. The same may be said of those epidemics which often prevail, as scarlatina, influenza, &c.

But Dr. J. as well as Dr. CRAIGIE and all others of old observation, must have witnessed the perplexities and the disputations amongst the profession, in endeavouring to determine and distinguish the *proximate cause* of disease, and must well know in order to retain some where in use this pretty anglicised latin word it has been changed from place to place, and from one meaning to another, until, in order to avoid the possibility of contesting its proximity by the interposition of some other between it and the effect, disease, it was at length, as it yet continues to be defined, the disease itself; thus actually translating it altogether from the whole catalogue of causes contradistinctly considered, and making it the *primary effect* of noxious causes, or the *actual disease*, the *cause* of which was the object of pursuit. Thus it became nothing but a perplexity. There is probably no small matter, or rather, definition in medicine, more certain to be enquired about by the pupil, than the meaning of "*proximate cause*." And when this enquiry comes, what can the preceptor reply that conveys intelligence? If he answer according to the present acceptation of the term, he must say 'it is the disease itself;' which leaves the pupil with *words* surely, but with no more ideas of causation, than does the definition of life in the language of a certain author:—that "life is the totality of those function which resist death." We think therefore Dr. C. has acted most wisely in dropping its use, for it had become a most nonsensical encumbrance, as it is in use. We see no objection to Dr. CRAIGIE's devision of causes: perhaps a little difference of nomenclature might have been more agreeable to the common usage in reasoning process; as *predisposing* and *exciting*, or *passive* and *active*, &c.

NOSOGENY, or the formation of diseases, ΝΟΣΟΣ ΓΕΝΟΣ. "The only legitimate mode of forming a correct theory of the formation of diseases, is to study the operation of remote causes generally—to observe their effects on the human body and its organs, and to endeavour to trace the connexion between the operation of these causes and the morbid changes induced in the course of various disease."

This remark of Dr CRAIGIE is very correct and important, as the remote predisposing cause is generally, as before observed, the modifier of the type of fever.

NOSOLOGY.—“With the view of communicating just ideas of the resemblances and affinities, as well as the differences of disease, and exhibiting correct views of their mutual relations, it is usual to distribute diseases in a certain method or order. The general principle of pathological distinction, is to arrange diseases into certain tribes or assemblages, according to their resemblances and their dissimilitudes, in imitation of the arrangements of natural history, &c. In distributing diseases in this manner, it is necessary to distinguish each class, order, family genus, and species, by a certain number of characters by which it may be known from those which most closely resemble it, and to designate each, thus distinguished, by an appropriate character or appellation. Nosology may therefore be distinguished into two divisions :

“*Nosotaxy*, or the distribution and classification of diseases ; and

*Nosonomy*, or the nomenclature of diseases.”

Dr. CRAIGIE adopts for himself, as the basis of classific distinction, the pathological nature of the different morbid processes, and subdivides these as nearly as may be, according to the anatomical arrangement of the textures and organs of the animal body. These bear a very close analogy with Dr. Goon’s arrangement, and less liable than any other arrangement, to overrule the rights of induction, or the true philosophy of each individual disease—rights which belong to every practitioner, and which should be freely exercised in determining the diagnosis, the pathology and the prognosis, as well as the general and special therapeutics of every individual case, no matter to what class, order, genus, or species it may have been said to belong.

“NOSOGRAPHY, or SEMEIOGRAPHY, the department of practical medicine which describes diseases according to their symptoms—these being divided into *essential*, *pathognomonic*, or *diagnostic*,—*general*, and *accessory*, but *not necessary* ;—and *secondary* or *supervening*, the *symptomata symptomatum* and *symptomata supervenientia* of authors.” “It is of the utmost importance for the physician to observe carefully, and distin-



guish accurately the different classes of symptoms; and as this cannot be accomplished without very just and accurate ideas on pathology, general and special, it becomes impossible in practical application to disjoin the knowledge of morbid processes from that of their characteristic symptoms; and the whole subject of the study of symptoms is to connect them with their appropriate morbid or pathological causes, &c. If we could repose confidence in the accuracy of our observation, and in the constancy of the relation established between these diagnostic signs and the pathological state of the organs, that part of medicine which consists in recognizing and distinguishing diseases would then be a perfect art." Though pathological researches have tended greatly to diminish the number of uncertainties and obscurities between symptoms and other causes, still Dr. C. acknowledges that perfection in this department is still remote; and that "the physician has still daily occasion to remark the fallaciousness of some of his most usual diagnostic means; and the progress of various diseases, affords examples of complication and obscurity which make him feel forcibly the conjectural nature of his art, until symptoms so unequivocal have taken place, that diagnosis is no longer practically useful."

"PATHOLOGY—The science which enables the practitioner, in any given case, or number of cases of disease to form, from the attentive consideration of the external signs and symptoms, an idea as accurate as possible, of the nature and extent of the morbid action or actions in the tissues and organs of the living body—a science of great extent, and embracing several subdivisions. These are,

*Pathological Physiology*, or the assemblage of facts obtained by the study and comparison of the actions and functions observable in the healthy body, and their variations in the different morbid states of particular organs, or of the system at large." And "*Pathological Chemistry*, which from the knowledge possessed of the natural conditions and chemical constitution of the different fluids of the animal body, and of the changes which take place during disease, enables the physician to determine the nature of those changes. And

*Pathological Anatomy*, a third species of information, derived from the careful inspection of the organs of the bodies of those

cut off by disease; regarding the effects, and occasionally regarding the nature of the morbid action."

"Pathology and symptomatology are so closely and necessarily allied, that neither can properly exist alone, or be cultivated apart. Every fact and principle of pathology derives its value from the explanation which it affords of any symptom or set of symptoms; and it is totally impossible to establish a rational symptomatology, without a collection of such facts and principles. Hence the great object of pathological inquiry is to enable the physician to distinguish between essential, or pathognomonic, and general, or common, or accessory symptoms; and above all, to determine from the presence of each, the stage, degree, intensity and effect of the morbid process, with the view of treatment."

THERAPEUTICS, comprehends two great divisions. One, *Prophylactics*, relating to the means of maintaining health and preventing disease; the other, therapeutics, properly so called: each embracing

*The prophylactic*, or preventive department, containing

- a. Hygiene:
- b. Medical Police.

*The Therapeutic*, or curative department, including

- a. General Therapeutics.
- b. Special Therapeutics.

*Hygiene*, relating to the general rules established by physiology, etiology and pathology, for the preservation of health.

*Medical Police*, referring to those measures either of precaution, prevention, or rectification, which are adopted, to counteract the operation of deleterious principles or morbid agents generally on the human frame.

*General Therapeutics*, the mode of applying these general principles to the treatment of individual diseases.

If, in all instances, the pathological cause or causes were perfectly known, and if, at the same time, we were perfectly acquainted with agents which could operate on these causes directly, and efficiently, and remove them entirely, the principles of therapeutics would rest on a sure and immutable foundation, the curative indications would be simply to remove the pathological cause, or causes of the disease, and the healing art would be reduced to great certainty and precision. This perfection, however, pathology has not yet attained; and the principal lesson

which it has taught, is that which is named *cure*, consists not in the positive removal or extinction of a morbid process by direct means, but in the gradual subsidence of the morbid action under a favorable combination of circumstances, and the restoration of the actions of health. The cure of disease by direct means is indeed very rarely practicable; and though pathological causes are known, our means do not operate on them; while in the diseases in which the causes are unknown, curative indications must be derived from symptoms. While healthy properties are impaired, we know no agent by which they can be directly restored; when vital action is perverted or deranged, we possess no means of immediately rectifying it, but must be satisfied with using those means under which it is most likely to rectify itself; and when morbid processes are established, they pursue a certain course, and tend to a particular termination, and all that the physician can do, is to moderate and restrain the violence of the process so much, as to prevent it from injuring important and essential organs."

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#### *Cases of Laceration of the Iris.*

DR. DAVENPORT has favoured the pages of the *Boston Med. & Surg. Journal*, with some interesting cases of laceration of the iris; the first of which is beautifully illustrated by a coloured engraving. He offers this case "as an illustration of laceration and prolapse of the iris," whilst at the same time, it presents a remarkable instance of the power of nature in restoring the eye from the effects of a severe injury. This accident was occasioned by a severe blow upon the left eye, from a fragment of stone. Dr. D. "saw him soon after the accident occurred, and found an oblique and irregular wound about four lines in extent, of the inferior and inner part of the cornea: a considerable portion of the inferior and nasal part of the iris torn from the ciliary ligament which protruded through the wound and hung down upon the eye ball; the anterior and posterior chambers of the eye filled with blood, so as entirely to conceal from view the pupil and remainder of the iris. The cornea was prominent, from the contents of the globe, particularly at the wounded part.



The conjunctiva was somewhat injected, great pain in the eye ball; vision in this eye, extinct, at least for the present."

The protruding portion of the iris was removed with forceps and curved scissors, in order to prevent additional irritation from exposure and friction. Some bloody serum escaped from the anterior chamber, after which, the edges of the wound were carefully adjusted, and compresses wet with cold water secured by a light bandage. Venesection, a brisk cathartic and antiphlogistic regimen were adopted. This operation was performed on Tuesday, the 28th September. Dr. D. did not see him again until Saturday, during which time he had been visited by an irregular practitioner who had treated the eye with belladonna, and the frequent application of a powder of calomel and white sugar, blown into the eye through a quill, (perhaps as the farmers do their horses, to "*cut the film*," from the eye.) When seen on Saturday, the inflammation had of course, considerably increased, with evidences of deep seated ophthalmia—pain severe, but not constant; and was confined chiefly to the brow, temple, and cheek bone. The intolerance of light, and the lachrymation were moderate. Notwithstanding the severity of inflammation which had supervened, the absorption of the effused blood in the chambers of the eye had gone on so extensively that the superior point of the iris, and a small portion of the dilated pupil could be seen, and the patient could distinguish the outline of large objects. On Monday, two days after, the absorption was found to have brought to view nearly all the superior half of the iris and pupil, and the iris was found of a light greenish instead of its natural blue colour. The circum-orbital pain had diminished and the power of vision improved. The use of purgatives and cold wet pledgets was continued. On Wednesday, shreds and patches, of blood were visible in the pupil, and also red spots on the surface of the iris, and a portion of coagulated blood remained above and below the corneal wound, and the accidental pupil had become visible at the lower part of the anterior chamber, though somewhat obscured by a coagulum of blood. On Friday, the 9th day after the accident, "scarcely a trace of blood remained in the anterior chamber. *The false, accidental pupil*, (as illustrated by the accompanying plate,) *presented the appearance of being a continuation or enlarge-*

ment of the natural pupil, forming with that, a large and irregular aperture, by the separation of one half of the circumference or external margin of the iris from the ciliary ligament. A point of the pupillary margin of the iris, of a triangular shape had become engaged in, and adhered firmly to the opaque cicatrix, left by the wound of the cornea. The cicatrix formed a point of attachment for this part of the iris, by which the inferior boundary of the natural pupil was in some measure preserved. This cicatrix is shown in the plate by a white opaque line, crossing the cornea obliquely just below the axis of vision, and peeping through the substance of that tunic. On Saturday, the entire pupil was found black and transparent, or nearly so; the iris however, not manifesting any contraction or dilatation on changes of light. The patient could distinguish large print with the injured eye, but not without a misty appearance. There had not appeared at any time, muscæ volitantes, nor luminous spectra. In a few days he returned to his work, guarding the eye with a pasteboard shade.

On the 12th of November, the wound of the cornea had become firmly cicatrised, the cornea retaining its natural size and convexity. The superior half of the iris dilated and contracted well; the inferior being attached to the cornea, was of course, without motion. By contracting the lids very slightly, vision was equally as perfect as in the sound eye."

Dr. DAVENPORT has had three other well-marked cases of laceration of the iris, the result of injury; the first of which was complicated with opacity of the lens and may be seen in a former number of the *Boston Med. & Surg. Journal*. The second, when first seen was accompanied with complete amaurosis, and the iris had nearly disappeared. The third was that of a young blacksmith, who was struck by a piece of iron upon the right eye with such violence, that the cornea was ruptured transversely, with a loss of part of the contents of the globe. On recovery, "the greater part of the cornea was found opaque, with closure of the natural pupil and obliteration of the anterior chamber, except at the upper margin of the cornea, where a false pupil had been formed by the detachment of the iris from the ligament. Through the pupil, he can see large objects pretty distinctly. Luminous bodies, as the flame of a candle, to this eye

appeared to be greatly multiplied ; so that he could at any time amuse himself with an illumination by the aid of three or four common lights. The central image was, however, the most distinct ; those extending horizontally on either side becoming more faint until they ceased to make any impression on the retina. It is worthy of remark, that, within a few months after the above mentioned accident, the left eye, without any other assignable cause, was attacked with aquo-capsulitis, or inflammation of the lining membrane of the anterior chamber, involving finally the iris. This eye recovered chiefly under the use of depletory remedies, followed by an active course of calomel and opium."

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### *Nature of Inflammation.*

In writing on this very interesting subject, Dr. M. HALL, in his book on the principles of Theory and Practice of Medicine, "institutes an inquiry into the condition of the true capillary, the secretory, absorbent and newly-formed vessels, the minute arteries and veins, the large vessels, the heart, and blood." The result of these inquiries is his conclusion "that each cause of inflammation induces such a physical effect upon the internal surface of the capillaries as leads to the adherence of the globules of the blood to it, and to its ultimate secretion. This stagnation augments as the inflammation increases and becomes more diffused ; and seems to constitute the essential character of the disease. Any augmented or diminished action, on the application of stimuli, he has never been able to detect.

"Obstructed capillary circulation leads to enlargement of the minute arteries—arteries being muscular organs, and muscular organs always augmenting in the ratio of the opposition to be overcome by them in the performance of those functions. The condition of the minute veins is not ascertained.

The secerning vessels are variously affected by the various degrees of inflammatory action—an effusion of serum, marking the lower ; a secretion of albumino-fibrine, the higher degrees ; and pus, the highest of all.

The functions of the absorbent vessels are not less modified than those of the secerning vessels.

After lymph has been long poured out, it becomes organized, and numerous vessels carrying blood, are observed in it, pur-



suing a various course: these have been delineated by Monro, Hunter, and Lobstein, as seen in cicatrix, in portions of pendulous coagulable lymph, in layers of lymph, and in coagula of blood.

The enlargement of the blood-vessels is not confined to the minute arteries—the larger arteries, in the immediate vicinity of the inflamed part, also enlarge. It is not certainly known how far this enlarged condition of the arteries extends from the seat of inflammation, but that the inflammation of a part affects, not only the arteries and veins in its vicinity, but also the heart, is gathered from facts like these:—The pulse of the radial artery, leading to an inflamed hand, is more forcible than that of the other wrist; the veins leading from the inflamed hand, yield their blood more freely than the similar veins of the other arm; the heart also beats with an augmented impulse and greater frequency.

‘The blood is well known to undergo considerable changes in inflammation: the appearances of cupping and of buff, of the blood drawn from a vein, are sufficient evidence of this fact; if the same appearances have not been observed so familiarly upon arterial blood, it is probably because arteriotomy is much less frequently performed than venesection.’—*Hall*.

In Dr. Hall’s chapter on this very interesting part of the subject before us, he has equally aimed to preserve facts and to discard conjectures, rightly observing, that—The condition of medical science still requires this separation of what is ascertained from what is only imagined—of the true from the false: to discover the former, and to detect the latter, are equal benefits conferred upon our profession.—A sentence, which it would be well for every medical student to carry with him throughout his curriculum—and one, which every medical author would do well to set before his eyes whenever he takes the pen into his hand. Medicine, perhaps, more than any other science, if we except at the present time political economy and divinity, is inundated with conjectures and vain imaginations, and crude and undigested fancies, the abortions of prolific but feeble minds—and facts, comparatively few, come to be disregarded because of the superfluities of fiction, than which, there is nothing more evil, more dangerous, or more destructive of true science.—*Medico-Chirurgical Review*.

*The changes in the condition of Inflammation.*—According to Dr. HALL, these are eight:

“1. *Resolution* is the mere subsidence of inflammatory action, and the only proper termination of the process. It is effected by the absorbent power of the minute veins, and the contractile power of the capillaries.”

2. *Œdema*. "The interstitial effusion of limpid albumen or serum, viewed distinctly from the repletion and enlarged size of the capillary and minute vessels constitutes *œdema*, the *white swelling* of inflamed parts, sometimes accompanying, sometimes following, the actual inflammation. It frequently remains in the form of a pale and colourless swelling, after the vascular repletion and the consequent redness having disappeared. In one case—inflammation of the larynx—it is frequently the cause of death, obstructing the upper orifice of the trachea and suspending respiration.

3. *Adhesion* is affected by an intervening deposit of coagulable lymph, or albumino-fibrine. When this takes place, uninterrupted by other processes, it is what surgeons designate *union by the first intention*. When other processes intervene, the effect is slower and modified, and cicatrization takes place. Both these occur in all the tissues of the body alike, whether internal or external, whether canals or cavities.

4. In *softening*, or *ramollissement*, the opposite adhesion takes place—the natural cohesion of the inflamed part is destroyed; it, likewise, occurs in all the tissues; most, in the parenchymatous substance and mucous membranes; least, in serous membranes. In certain tissues, as that of the lung, it is analogous to mortification of other tissues. In others, the brain, for instance, it corresponds to suppuration.

5. *Induration* belongs to chronic, *softening* to acute inflammation, and depends upon the interstitial deposit, probably of coagulable lymph, or albumino-fibrine.

6. *Ulceration*. "Interstitial absorption, whereby the superficies of a part is removed, produces *ulceration*, which is *simple*, or healthy; *spreading*, or phagedænic; and *destructive*, or sloughing. In the external cutaneous, internal mucous, and synovial membranes, it is common; in the serous membranes, rare;—and it obtains the name of *suppuration* when it takes place in parenchymatous substances; and *caries*, in bony textures. It may proceed from, or it may yield to an opposite process, as cicatrization. And, as an ulcerating is always an absorbing surface, it may give rise to enlargement of neighbouring glands, and to inflammation of the absorbent vessels. The affection of the inguinal glands in chancre, and also in gonorrhœa, is a fact familiar to us all. Is there ulceration in all cases of the latter malady thus complicated with bubo?"—*Hall*.

7. *Suppuration*. The observations of Burgmann, Hunter, &c. prove that purulent fluid may be formed without any breach of surface. This is *suppuration*, and one of the most frequent results of inflammation—exhibiting itself in the four varieties of *abscess*, where the pus is enclosed in an orbicular cavity; *fistula*, where it burrows between the adjacent textures; and *infil-*

*tration and diffusion* when it gets into the meshes of the cellular membrane, or is spread over the surface upon which it is formed.

S. *Gangrene*. Inflammation sometimes leads to *gangrene*, and to *sphacelus*; terms, conventionally employed to designate—the former, the condition of the part when on the point of losing its vitality—the latter, that of a part absolutely dead, and ready to pass into a state of decomposition.

“Nothing can illustrate the varied phenomena of inflammation, on a minute scale, better than the variolous pustule; at first, we have simple inflammation—inflammation of a sebaceous gland—redness and tumor; on the third and fourth days we have the effusion of *serum*, a vesicle, the duct of the gland tying down its centre; on the fifth day, we observe the effusion of *pus* around this central point, and within the external margin of the vesicle, the intervening space being occupied by transparent serum, and appearing of a red, flesh-colour, well contrasted with the opaque pus, and there is a surrounding *areola* of deep inflammation; on the seventh or eighth day, the serum is entirely replaced by pus; and on the eighth or ninth, the central duct has been absorbed or has sloughed, and the pustule is orbicular. There is also the early effusion of *lymph*: and, at a subsequent period, it is found that a portion of the *cutis vera* has sloughed. The whole of this series of the phenomena of inflammation is followed by cicatrization, again implying the effusion of lymph.”  
—Hall.

“THE MODIFICATIONS OF INFLAMMATION, are most important and interesting, as these arise out of the varieties of texture, or are produced by differences in the conditions of the system.

*Inflammation of the serous membranes* is marked by redness, and found to consist in points, stars, and arborescent forms, arising, 1st, from enlarged vessels, and, 2d, from extravasated portions of blood. Dryness, from checked secretion, is rare; augmented effusion from the surface of the membrane, more general. This effusion consists of serum, coagulable lymph, albumino-fibrine in *layers*, or adhesions, pus or puriform fluid; sanguineous serum. An important, although negative character of inflammation of the serous membrane is, that it seldom leads to ulceration.

In inflammation of the mucous membrane there is redness, injection, enlarged blood vessels, increased secretion of mucus, at first transparent, afterwards opaque and puriform, re-assuming its transparence as the inflammation subsides. The exudation of coagulable lymph is rarely seen, although we have instances of it in the trachea in croup; and in the uterus, in dysmenorrhœa, when it forms, in each case, a false membrane.

Corresponding as inflammation of the mucous membranes does in these respects to that of the serous membranes, it is, in



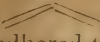
others, as diametrically opposed. Inflamed mucous membranes *soften* and *ulcerate*,—events happily uncommon in inflamed serous membranes.”

“Suppose an abscess in the liver. It enlarges; it proceeds to evacuate itself; this may be effected externally, in the hypochondrium; internally, into the intestines, or through the lungs into the bronchia. In the first case, adhesive inflammation unites the two contiguous portions of peritonæum, and the subsequent ulcerative process pierces through these two folds of membrane with the intervening layer of albumino-fibrine—and then through the external integuments. The cavity of the abdomen is protected and preserved from an effusion of pus, which would immediately induce a terrible and fatal peritonitis! In the second case, similar phenomena occur, and the abscess finds an issue into the intestine, the abdomen being still protected and preserved as before. In the third case, the two contiguous peritoneal surfaces first, and then the two adjacent pleural surfaces, unite by albumino-fibrous adhesions; and, lastly, the ulcerative process proceeds to open a way for the pus through these adherent membranes, the intervening diaphragm, the cellular tissue, and the bronchial parietes, and the pus is eventually expectorated, the cavity of the abdomen and that of the pleura being equally preserved!”—*Hall*.

Mr. Travers tied the duodenum of a dog, so as completely to obstruct the passage. On the two following days the animal was sick, and his respiration hurried. On the fifth day he passed a copious stool of the same appearance as the fluid discharged by vomiting. From this time the sickness ceased, the breathing became natural, he fed and digested his food—the cure was established by the fifteenth day, and he was then killed. On examination, the lacteal system was well displayed. The folds of a portion of omentum contiguous to the strictured intestine adhered to it. A slight depression was observed in the circumference of the gut—which was then carefully laid open—the villi were turgid with chyle—the villous surface more vascular and deeper-coloured than usual. A transverse fissure marked the seat of the ligature. The edges of the section were distinctly everted, and the appearance corresponded with that of the union by suture.

In another dog, a fold of ileum was strangulated, a little above the angle. The strangulated piece below it was then cut off, and the cut extremities joined by ligature. The wound was sewed up, the animal not appearing to suffer materially—the second and third days he was sick and vomited bile, but drank a little milk and water. On the fourth day, passed a solid stool. In a month, was perfectly well, and shot. The exter-

nal wound was healed. There was no appearance of disease in the abdomen—and but few adhesions of the peritoneum. The

ileon lay thus  upon the vertebrae. At the internal angles the sides adhered to each other. The opposite was closed by adhesions to the omentum and neighbouring intestine. Upon laying open the tube, it appeared that the ligature at the ends of the gut had been discharged through the canal. At one point, the line of union was scarcely completed; and there appeared a little cyst, like an abscess, communicating with the tube, in which the tied ends of the gut had been lodged previously to their being voided.

“In all these cases,” and in the similar ones of hernia, and of intussusception, “the contiguous points of serous membrane unite by the effusion of albumino-fibrine; the interior tissues, with the mucous membrane, are served by the ulcerative process. The cavity of the peritoneum is *guarded* from the irruption of the faecal matters by *adhesive* inflammation; whilst the canal of the intestine is *preserved entire* by the *ulcerative*! Now let us suppose these properties of the serous and mucous membranes reserved! Every inflammation of the former would tend to ulceration and abscess; every inflammation of the latter, to close a canal!”—*Hall*.

Inflammation is also modified by the different conditions of the system. In rubeola, for instance, the phlogistic diathesis prevails. In scarlatina, the character of the local inflammation and its attendant fever, is frequently typhoid. And changes take place corresponding to these differences. The changes which take place in inflammation occurring in the phlogistic diathesis, as has already been shown from Dr. Hall's work, are aptly illustrated by the varioloid inflammation, in the *distinct* form; that which takes place when the typhoid type is present, receives a similar illustration from the pen of our author in the *confluent* variety—the papulae are less hard and elevated; the serum and pus are less distinctly characterized, and resemble an undefined, and sometimes bloody, *sanies*; the progress, the circular and orbicular forms, the periods, the termination of the eruption, are less marked, less distinct; and there is a great disposition to slough, and consequently, to scars.

We have been led into so full an analysis of this subject, as treated by Drs. Hall and Craigie, that we have little space left for considering the chapters devoted by the former to “the distinctions between inflammation and irritation and congestion”—“the influence of inflammation”—and “the diffusion of inflammation”—and must very briefly notice that which treats of *inflammation as a curative means*. Without it, the art of surgery could not exist. Every operation implies the resources of Nature in

healing divided parts. As a curative measure it is employed by Nature and Art. By the former, in apoplexy, in the formation of an artificial anus, and in conducting pus from an hepatic abscess to the surface;—by the latter, in the cure of artificial anus as devised by Dupuytren, in the cure of hydrocele by injection—in that of prolapsus uteri—and in the treatment of nævus, &c.—the two latter applications of it are claimed by Dr. H. as inventions of his own.

*On Blood-letting.*

The following observations of Dr. HALL, as affording a rule for blood-letting in all cases in which it requires to be fully instituted, a rule for guarding at once against inefficient and undue blood-letting, and a source of correct diagnosis, are worthy of the close attention of every practitioner. We give them, with Dr. JOHNSON'S remarks which accompany them in the Review.

It is a remarkable fact, that “if several patients of similar strength and constitution, but affected by dissimilar diseases, be respectively placed in the erect position and bled to deliquium, they will be found to lose very various quantities of blood,” one will bear the loss of 50, 60, or even 70 ounces, without syncope—another will not endure to lose four ounces.

The rationale appears to be, that, “different diseases induce in the constitution different powers or susceptibilities in regard to the effects of loss of blood. Each disease seems to have its own virtue in this respect: this is determined by placing the patient perfectly erect, and bleeding to incipient syncope: the quantity of blood which flows is the measure of the protective influence of the disease in one class of cases, and of its influence in super-inducing a susceptibility to the effects of loss of blood on the other. In cases in which it is doubtful whether the pain or other local affections be the effect of inflammation or of irritation, the question is immediately determined by placing the patient upright and looking upwards, and bleeding to incipient syncope: in inflammation much blood flows; in irritation very little. The violence of the disease, the powers of the system, and the due measure of the remedy, are determined at the same time. *There is, in my opinion, no single fact in physic of equal importance and value, in the diagnosis of acute diseases, and in the use of a powerful remedy.*”—Hall.

An interesting scale of diseases may be formed representing these properties.

Persons in health, of moderate strength, will generally faint if bled in the erect posture, on taking fifteen ounces of blood. Dr. H. has known 70 ozs. to be taken in a sitting posture, in the



tendency to apoplexy without syncope! but the case is an extreme one. Patients with meningitis, encephalitis, pleuritis, or pneumonia, frequently lose 35 ounces of blood without fainting. In *bronchitis*, little more is borne to be lost than in health. A stout person in *fever* will frequently faint on losing 10, 12, or 14 ounces of blood. In *intestinal irritation*, with urgent symptoms, even the abstraction of nine or ten ounces will generally induce deliquium. In *delirium tremens* or *puerperal delirium*, the patient soon faints. And the same thing is observed in cases of violent reaction, arising from loss of blood. In dyspepsia, hysteria, and chlorosis, the susceptibility to syncope is very great, and Dr. H. has known a patient of good strength, affected with cholera, faint on taking four ounces of blood, who had previously lost, under the influence of inflamed mamma, 20 ounces without faintness: *Paralysis* from *laceration of the brain* and *apoplexy* from concussion, before reaction takes place, or inflammation is established, are cases also of diminished tolerance. It must also be carefully noticed that cases of accident do not bear the loss of blood like those of inflammation.

These facts afford:—1. A rule for blood-letting, in all cases in which it requires to be fully instituted. 2. A guard at once against inefficient and undue blood-letting. And 3. A source of diagnosis.

The rule is suited to the degree as well as the duration of the disease; and is not less adapted to those most frequent of all events, *mixed* cases—inflammation and irritation conjoined.

“It is difficult to say whether more injury has been done by an undue or by an inefficient use of the lancet. In inflammation we must bleed fully—in irritation we must bleed cautiously. Inefficient blood-letting in the former, and undue blood-letting in the latter, are alike dangerous or even fatal to the patient; from both extremes we are guarded by the rule which I propose. By directing the patient to be placed in the erect position, and bled to incipient deliquium, we shall often take much more blood than we should have ventured to *prescribe* to be taken in inflammation, and very much less than we might be supposed to direct in irritation; and in both these cases the rule conducts to the only safe mode of treatment. And, if much blood has flowed before the occurrence of syncope, inflammation must be suspected; if little, we must suspect that, however similar the symptoms, the case is in fact of a different nature—perhaps irritation—perhaps exhaustion.”—Hall.

He has also found that, in every case in which early syncope occurs from blood-letting, the more remote effects of loss of blood, as reaction, or sinking, are also very liable to occur; and it is in these cases that sudden dissolution has always followed the use of the lancet. There is, in every point of view, intolerance

of loss of blood. The reverse of all this obtains in inflammation, which seems to be incompatible, to a certain degree, with the effects of loss of blood; these are, on the other hand, very apt to supervene as the inflammatory action subsides.

Dr. Hall very wisely solicits the co-operation of the profession in the further investigation of this subject, not imagining his "rules" to be without exceptions, and rightly deeming it "as important that these should be pointed out, as that the rule itself should be established." He makes mention, himself, of two such. In some cases of fever requiring blood-letting, the patient cannot support the erect position: in such a case the arm must be first prepared; the vein should then be promptly opened; and then the patient should be gently raised and *supported* in the upright position, carefully avoiding all muscular effort. On the other hand, in the case of congestion of the brain from exhaustion, there is not such early syncope from blood-letting as might be expected; and yet it is obvious that the system cannot bear the loss of blood.

"Two objections have been made in reference to this rule for the administration of blood-letting: the *first* is, that in some cases not inflammatory, more blood might be taken than the patient could bear to lose in order to institute the test; my reply is, that such cases are not *included* in my proposition, which only relates to cases in which blood-letting *is required to be FULLY* instituted." The second is, that in some cases *more* blood ought to be taken than would flow before syncope is induced. I greatly doubt this assertion; I think it replete with *peril*; but if it be true, let the patient be replaced in the recumbent posture, wait a few minutes, and again let the blood flow; we have at least ascertained the state of tolerance of loss of blood, and this fact will *guide* us in determining *how much more* blood may be withdrawn; it is a fact *added*; it is *knowledge* substituted for what *must* otherwise be ignorance."

The results of Dr. Hall's investigations appear in a table, which we shall add to the pages of this review, fully agreeing with its very able author, that—No one *can* pass the eye over it without being impressed with the value and importance of the facts it displays, with the diagnostic, the guide, the guard, which it affords.

I. AUGMENTED TOLERANCE.—Represented by the mean quantity of blood which flows before incipient syncope.

I. Congestion of the brain.

1. Tendency to apoplexy . . . . . }  $\frac{3}{4} \text{ XL} - \text{L.}$

2. Apoplexy from congestion . . . . . }

II. Inflammation of the serous membranes.

1. Arachnitis .....	} $\frac{3}{5}$ XXX.—LX.
2. Pleuritis .....	
3. Peritonitis .....	
4. Inflammation of the synovial membrane, and of the fibrous textures of the joints.	
III. Inflammation of the parenchyma of organs.	
1. Of the substance of the brain .....	} $\frac{5}{5}$ XXX.
2. Pneumonia .....	
3. Hepatitis .....	
4. Inflammation of the mamma, &c. ....	
IV. Inflammation of the skin and mucous membranes.	
1. Erysipelas .....	} $\frac{3}{5}$ XVI.
2. Bronchitis .....	
3. Dysentery .....	
II. HEALTHY TOLERANCE. This depends on the age, sex, strength, &c., and on the degree of thickness of the parietes of the heart, and is about	
} $\frac{3}{5}$ XV.	
III. DIMINISHED TOLERANCE.	
1. Fevers and eruptive fevers .....	$\frac{3}{5}$ XII.—XIV.
2. Delirium tremens and puerperal delirium	$\frac{3}{5}$ X.—XII.
3. Laceration, or concussion of the brain ..	} $\frac{3}{5}$ VIII.—X.
4. Accidents before establishment of inflam- mation .....	
5. Intestinal irritation .....	$\frac{3}{5}$ VIII.
6. Dyspepsia. Chlorosis .....	$\frac{3}{5}$ IV.
7. Cholera .....	

### *Retraction of the Leg cured by an Operation.*

We are happy in having it in our power to remark, that a few days previous to that on which the *Gazette Médicale* came to hand, which contained the following case and operation of M. JAUENS, a case of similar nature was presented for the inspection of the professor of Surgery in the Medical College of Georgia, Dr. P. F. EVE. who at once decided on the operation for extirpating the diseased and disorganized muscle, and his patient is now under preparation for the operation. The muscle affected in this case is the adductor longus femoris, causing an inconvenient and distressing adduction of the left lower extremity. The particulars of this case we hope to afford our readers in a future No. of this Journal. Dr. EVE has not yet seen the March No. of the *Gazette Médicale*.

Brilat (Gerard,) a sailor fell from the top of the mast and lodged with the posterior part of the right thigh on the yard arm. For sixteen days he was treated on board the ship for a contusion of the soft parts, and sent to the Hospital of Antwerp the 29th July, 1836. For three months, warm baths and camphora-



ted frictions were employed. In the month of October, the patient was confided to the care of M. Lutens, surgeon of the same hospital. On examination he found that the right thigh presented no traces of ecchymosis or of inflammatory swelling; it was more meagre than the left, pressure on it occasioned very acute pain, and extending from the ischium to the knee, were felt a resistance and hardness analogous to the tension of a large hempen cord. The leg was flexed upon the thigh and could not be extended. In endeavouring to extend two bridges would be developed which passed evidently to the lateral parts of the knee and were incorporated with the tendon of the semitendinosus to which they communicated a great degree of tension. In whatever position the extremity was placed, and notwithstanding all the care to divert the attention of the patient, the slightest relaxation of the muscles could not be obtained. The patient was able to raise the limb in totality and flex it upon the pelvis; in order to march he was obliged to make use of a cane or a crutch, to carry the point of the right foot outwards, the heel inwards and flex the leg on the right foot.

The coxo-femoral and femoro-tibial articulations were exempt from lesion.

The patient declared that the flexion of his leg supervened slowly and insensibly.

M. Lutens endeavoured first, but unsuccessfully, to straighten the leg by means of Dessaut's apparatus and afterwards by the application of a straight splint with padding in the hollow of the ham.

Cupping, emollient cataplasms, warm baths, solution of hydrochlorate of ammonia, handling of the muscles, blisters, moxas, repeated tractions by the hands of assistants were tried, but without success.

"I had not, up to that moment," says the author, "formed a precise idea of the nature of the disease. I thought, however, that by making two lateral incisions upon the sides of the knee and incising the most tense parts, it would be possible to extend the leg.

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Two months elapsed without making any farther attempts, when M. Lutens determined to carry his idea of making the incisions on the sides of the knee into execution.

*Operation.* A straight bistoury was slipped under the tendon of the semi-tendinosus, two fingers breadth above its inferior attachment, and with a single cut I incised the tendon, the femoral aponeurosis and the skin.

Externally, I made a horizontal incision above the external condyle opposite to the direction of the fibres of the biceps muscle, the aponeurosis which envelops this muscle and forms a sheath for it, was divided, and the muscle exposed extensively to view.

The operation was performed in a few moments and gave rise to no accidents, the tendon of the semi-tendinosus was forcibly retracted upwards, and the patient requested to make efforts to extend the leg. The next day no hardness was felt in the thigh, pressure no longer occasioned the slightest pain, and the leg could be placed with the greatest facility in a state of perfect extension. The patient passed a good day; not the slightest tendency to retraction recurred, and no injurious consequences resulted from the application of the bandage to retain the limb in an extended position.

From that moment he was enabled to walk in the wards without support. The bandage was removed the 30th day after its application. Three months subsequently the patient walked with sufficient regularity and without a cane; he had some difficulty in flexing the leg on the thigh in which he succeeded only by contracting the muscles slowly. Every hope may be indulged that exercise and a few baths will restore to the soft parts their usual pliancy.

No doubt can exist respecting the cause of disease in this case; the patient having experienced a violent contusion on the posterior surface of the thigh, the flexor muscles of the leg were by degrees contracted in a permanent manner so as to keep the leg constantly extended.

The medication employed was based upon the true indications of the disease. We have, however one capital observation to make respecting the mode of its accomplishment. The elongation of the tendons of the biceps, semi-membranosus and semi-tendinosus muscles presenting in this case the same conditions as that of the tendo achilles in club-foot, the operation should have been performed in the manner employed by Stromayer for the section of the latter tendon. In this way the section would have been simplified, and the operator would avoid the serious reaction which is always to be apprehended when the operation is performed in the manner followed by M. Lutens. The same operation has been performed recently at Paris, by M. Duval, with success, and in the mode we have just indicated, but that of M. Lutens has the merit of priority and is worthy of fixing attention.

*New mode of operating for the radical cure of Cirsocele by*  
Dr. RAINAND.

It would be too tedious to describe all the modes which the ancients and moderns have employed in the treatment of Cirsocele, we proceed to mention only the principal ones by grouping them according to their resemblance with each other.

The most recent operations that have been employed for the radical cure of this disease may be referred to the two following methods. In the first which may be called the method by *puncture*, are included the modes of operating by the seton and by acupuncture proposed by M. M. Friche and Davat. They have the inconvenience of being of difficult application and of exposing to phlebitis by acting at once on the internal surface of the vessels.

The second method or that by *compression* is preferable and includes the plan which Delpech employed with agglutinative strips after the previous incision of the integuments, the twisted suture of M. Velpeau and the pincers of M. Breschet. Of these the two former modes labour still under the disadvantage of requiring the application of surgical means to several vessels at one time. The pincers of M. Breschet, which are intended to embrace only the dilated vessels seem to him to have succeeded miraculously. To these methods which do not yet possess the guaranty of complete success Mr. Raynauld has proposed a third from which he has just obtained a complete success. He practised it in the following manner. He seized with both hands the spermatic cord of the diseased side, pushing externally the vas deferens which can be easily recognised by its hardness, then pinching up the scrotum with the index finger and scrotum of the left hand so as to embrace the spermatic vessels and nerves he passed a curved needle threaded with a waxed thread through the base of the fold thus formed. The scrotum abandoned to itself left a space of about an inch between the point of entrance and of escape of the needle. The parts thus comprised are then tied with the thread upon a thick cylinder of linen of inconsiderable length placed previously between the thread and skin. The ligature should be tied over the cylinder with such a knot as to be able to augment or diminish the compression according to the indications. Small pledgets smeared with cerate for the punctures and a simple compress complete the dressing. The patient should remain in bed, the testicles being supported by a cushion and a diet as infeculent as possible and emollient enemata prescribed.

The inflammation which results is very slight and after two or three days the thread may be drawn more tightly over a new



cylinder. If a too intense inflammation supervene the ligature should be loosened and again tightened after having employed emollient cataplasms for two or three days. In proportion as the parts situated before the ligature are divided and those situated behind it cicatrize, it should be drawn tighter by degrees. On the fourteenth or fifteenth day nothing remains except the skin, which M. Raynauld divides with a bistoury passed along a director. The patients are generally cured in about twenty-five days.

The vessels obliterated are transformed into a fibrous impermeable cord. The circulation is interrupted by the obliteration of the two branches of the spermatic artery, but we know that the epigastric artery furnishes always a branch which passes along the inferior face of the vas deferens and which adhering to its fibrous envelop has followed it in its displacement. This branch anastomoses with those of the spermatic artery below the point where this artery is ordinarily tied at its divisions, on the other hand the artery of the septum furnished by the internal pudic may also concur in the re-establishment of the circulation. However this may be, the atrophy of the testicle has not taken place in any of the cases cited by the author. The venous circulation takes place chiefly by the communication of the spermatic veins with the vesical plexus and by the dorsal vein of the penis. The author thinks that the nervous influence is reestablished through the same nerves, cicatrisation immediately succeeding their section.

M. Jules Roux cites two important cases of cure. In one of the patients whom he saw six months after the cure, the testicle was in a normal state and the veins formerly dilated were converted into cords sensible to the touch. As to ourselves we think these facts are encouraging but they are not sufficient to authorize us to pronounce upon the excellence of this method, or upon its complete harmlessness.—*Journal des conn. Med-Chir.*

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*Some considerations on the Tubercular Affections of the Lungs* by LOUIS DELABERGE, Agrégé of the Faculty of Medicine of Paris.

(2D ARTICLE.\*)

We pass now to other considerations, for the subject of the case not being the same, gives rise to different observations. A woman aged 32, a native of Savoy and a pamphlet sticher by

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\* See vol. II. No. 6. of this Journal.

profession, was admitted into the *Hopital des cliniques* 13th of last November. She had black hair, black and sparkling eyes, long eyelashes, meagre face, cheeks coloured, especially towards evening, the nails well formed and her body obviously emaciated. The patient had a child presenting all the appearances of good health; she belonged to a family which though numerous had never presented in any of its members the marks of a scrophulous disposition. She had been affected eight months previously with a catarrh, without any appreciable cause.

From this period the patient coughed habitually, the cough being more frequent at night and occurred sometimes with such intensity, (the paroxysms then succeeding each other so promptly as to resemble the whooping-cough), that the contents of the stomach would be rejected by vomiting. A pain somewhat intense existed under the sternum and extended on the right to the sub-clavicular region—the patient did not complain of dyspnoea, but it was evident that she did not correctly appreciate her own condition, for the respiratory movements were rapid, the sputa were thick, yellowish, some of them striated with opaque matter and some slightly transparent, the latter well defined at their margins, the former slightly viscid, and running together into a common mass: the patient has never had hæmoptysis.

The chest seemed to be well formed, except that it presented a slight depression in the sub-clavicular region on the right and left. Percussion revealed an evident dullness in the right sub-clavicular region. When the patient was requested to open her mouth and a brisk percussion performed on the thoracic wall, the sound of the cracked pot (*bruit de pot fêlé*) was manifestly produced. On auscultation were heard the gurgling sound, the cavernous respiration and pectoriliquy when the patient spoke. She complained of palpitations which took place at intervals in the precordial region: the pulsations were 108, equal, small regular and but little resistant, she was much debilitated, complained of some cephalalgia and towards evening of a burning heat of the skin, when the cheeks were coloured of a vivid red. In the morning a slight cutaneous transpiration, the perspiration not abundant, urine flowed easily, and the catamenia had been suppressed for two months. The tongue thin, pointed, without fur, tolerably intense thirst, appetite weak, digestion difficult, abdomen slightly prominent and somewhat painful in the epigastric region and towards the sides, diarrhoea occurred at intervals and caused a remarkable emaciation.

Gum water, a julep with a grain of opium, enemata with the addition of a grain of theriac, (*confectio opii*) repose in bed, rice cream, constituted the prescription ordered for the patient.

For several days the symptoms remained stationary, but in the month of December, an aphthous eruption occurred in the mouth,

vomiting recurred with considerable frequency, the diarrhoea increased, the patient in an extreme state of marasmus and debility and died 6th December. The autopsy was made thirty-six hours after death. The body presented the most marked emaciation, no rigidity of the members; percussion still developed a dull sound in the right sub-clavicular region. The superior lobe of the lung was hollowed into a large, anfractuous, multi-locular cavern, anteriorly the excavation was limited only by a thin condensed, firm, resistant portion of the pulmonary tissue which adhered strongly to the pleura costalis; the viscus was infiltrated with tubercles more or less voluminous and thus presented an unusual volume. The left lung was less seriously affected although it was the seat of tubercles agglomerated at the root of the bronchi and in the thickness of the interlobular fissure. The liver was voluminous, and depressed by a large sulcus on a level with the costal cartilages, it descended on the right side, its tissue was yellowish and it greased the scalpel which penetrated into it.

The mucous membrane of the great extremity of the stomach was soft and thin without any trace of the dephtheritic inflammation of the mouth. The intestines presented ulcerations with elevated margins in different points and particularly towards the lower end of the ilium.—Such were the chief alterations which we observed in the cadaver of this woman.

This case cannot excite curiosity to the same degree as that which we have previously reported: it belongs evidently to the category of facts which have been so well studied, so well analysed in modern times by M. M. Louis and Andral. We have reported it here only to serve as a text for a few considerations. In the circumstances just related we find some facts which deserve to arrest the attention of the physician. This obstinate, paroxysmal cough, which, by the frequent concussions that characterised it, determined vomition, the dyspnoea, which, though pronounced, was not perceived by the patient, the sound of the cracked pot in the sub-clavicular region, an anormal sound which for a long time we considered as the pathognomonic sign of a pulmonary excavation, the eruption of the buccal mucous membrane which denotes a great period of the disease, and lastly, the amenorrhoea which requires some consideration in the treatment of the tubercular affection of the lungs. Such are the interesting facts which we desire to analyse and to which it appears to us useful that the attention of observers should be directed.

There is no physician who does not feel the necessity of knowing some signs by whose aid the first manifestations of pulmonary tubercles may be detected.

It is indeed generally believed that by opposing the disease in its incipency we will triumph more easily over the accidents



which it develops and have more power in arresting a lesion which must inevitably produce death. It was with the view of elucidating science upon this subject that Mr. Piorry has perfected the means employed in the percussion of the chest—that M. M. Andral, Louis and Jackson have specified a singular alteration in the sound of the pulmonary expansion, an alteration which gives some rudeness to this sound and which is particularly characterised by a sound more marked at expiration than at inspiration; while the contrary takes place in a normal state. It was with the same object that M. Hirtz has specified a contraction of the osseous cage of the thorax, a contraction which had been before indicated by M. Hopeins-Ramadge and on which the English physician has founded the most singular, therapeutic indications. Can we admit at the present day that these different data are capable of leading to a precise diagnosis of the tubercular affection in its nascent state? When we attend the visits of M. Louis we are astonished at the precision of his diagnosis, and each person is tempted to believe that he may arrive at the same result of astonishing exactness. But unfortunately this is not the case with the great majority of physicians, who want the vast experience which results from a scrupulous attention directed for a long time to the same phenomena; and we would willingly believe ourselves more skillful if we possessed some new light in diagnosing the tubercular affections of the lungs.

It is upon a fact of this nature that we believe it necessary to insist in these remarks.—The paroxysmal cough, with convulsive concussions characterised by numerous expirations, interrupted like those of whooping-cough; this cough causing an expulsion of the gastric contents seems to us to possess some value in the diagnosis of the tubercular affection at its origin especially when it has persisted for a considerable time. \* \* \*

\* \* Such a cough is found in most of the subjects attacked with pulmonary tubercles as revealing the first manifestation of their disease. Physicians are frequently astonished to see patients having the tubercular affection in a high degree of development, and labouring under great difficulty of respiration, who do not however complain of dyspnoea. It is difficult for them to conceive how the pulmonary parenchyma can experience a disorganisation so profound as to cause great difficulty of respiration, without painfully affecting the patients, and yet it would not be impossible to account for the difficulty they have in appreciating their own condition.

When a modification of our health supervenes progressively, we are but little qualified to appreciate its danger and importance. It is doubtless to the slow progress of the tubercular affection that we must attribute the calm state enjoyed by phthisi-

cal patients who have arrived at the most advanced period of their disease, and that disposition to hope which we observe in most subjects suffering with pulmonary turbercles.

We have for a long time considered the sound of the cracked pot as the pathognomonic sign of the tubercular affection. We heard once in a young child the gurgling sound, the cavernous respiration and pectoriliquy, we supposed the existence of a cavern in the pulmonary parenchyma; the results of our investigation were confirmed by a man whose skill could not be questioned, by Dr. Constant who has just died in the flower of his age leaving many precious labours unfinished: every thing induced us to believe that our diagnosis was correct, the child died, no tubercle was found in the lungs or in the bronchial glands—but a chronic bronchitis and a dilation of the bronchi. We re-perused attentively the works of M. M. Louis and Andral and ascertained that they had seen cases analogous to the one which had deceived us. Since that period we have performed percussion with great attention upon all the phthisical patients submitted to our observation, and we have remarked that in all of them the sound of the cracked pot is manifested when a cavern of some volume exists, when it is situated superficially in the sub-clavicular region, when the percussion is strong and brisk and when the patient keeps his mouth open: This sound may be perfectly compared to that which is produced by bringing the hands forcibly together, so that their palmar faces look towards each other and then pressing a sudden movement upon one of them; the air imprisoned between the two faces which constitute a cavity and being expelled produces, while passing through the narrow openings, a slight metallic sound. This sign we repeat appeared to us to be constant and we experienced a satisfaction in believing that we possessed a pathognomonic sign by which to detect the presence of excavations in the sub-clavicular region. Recently we have discovered that this sign may lead to error.

A patient was admitted into the Hôpital des cliniques, with a delicate deteriorated constitution; he was affected very severely with rubeola and with the special bronchitis which complicates almost always the rubeolic affection. The exanthematous disease ran regularly through its periods, the cough remained obstinate and painful—the matter expectorated was opaque, whitish swimming in a transparent serosity the respiration was frequent and the fever continued presenting exacerbations towards the evening—Some purgatives were administered but nothing relieved this serious pathological state. Mucous rales existed throughout the entire chest, the patient was much oppressed, the skin was warm, burning, a copious diarrhoea supervened and the marasmus became extreme. A new exploration of the chest was made by auscultation and percussion. The mucous rale

existed in the left sub-clavicular region; this rale was displaced by cough and the the effort of respiration, the respiration was somewhat tubular or blowing at this place, percussio gave rise to no dulness of sound but very evidently to the sound of the cracked pot. The frail constitution of the patient, the pathological disorders which existed, the important commemorative circumstance of the rubeola whose traces still remained, and which has the singular property of hastening the progress of the tubercular affection, and especially the sound of the cracked pot, induced us to diagnosticate in this patient a cavern situated in the left sub-clavicular region. The disease advanced and the patient succumbed in a state approaching asphyxia. The autopsy was carefully made, the lungs were very much engorged the principal divisions of the bronchi red and their capillary divisions inflamed; no appearance of tubercles or of broncheal dilatations or of a cavern was found. The error is here evident, the pathognomonic sign has deceived, the sound of the cracked pot can no longer be regarded as the unerring index of a tubercular excavation and henceforth it is indispensable to invoke another proof. We should not however reject too hastily the value of the sign in question if we reflect that percussio denoted only a very slight obscurity of sound in the left sub-clavicular region, and if we agree with M. Louis that this circumstance ought to prevent the supposition of a tubercular agglomeration or cavern, we will perceive the necessity of associating the results of a gentle percussio with those of a strong percussio, before pronouncing upon the semeiologic value of the sound of the cracked pot. This phenomenon then cannot be of any value to us unless when it coincides with an obscurity of sound developed by a gentle percussio, and already we have had occasion to verify the correctness of this sign.

The diphtheritic modification of the mucous membrane of the mouth is a serious accident in the tubercular affection of the lungs, it is manifested generally in young subjects, when the debility is pronounced and is almost always accompanied with a continual febrile movement tolerably intense. The cause which presides over the development of this alteration has not yet been much insisted upon—it has been omitted in the descriptions of many observers. Would it not be important to know the exact condition of the patients who are affected with it? Would it not be useful to study the sympathetic derangements which occur under its influence, the lesions which accompany it, the prognostic value which it may have, and the means suitable to arrest its progress? Should we not establish the particular indications which its treatment demands? We would be well pleased to undertake this task, but as we possess only a few facts upon this subject we defer its consideration to another moment.



Amenorrhœa often gives rise to particular indications in the treatment of the tubercular affections of the lungs. Certain practitioners believe that in order to arrest the progress of pulmonary consumption it is important to recall the menstrual flux. This therapeutic rule should be discussed: if, at the commencement of phthisis when the signs of the malady are yet but little marked, a suppression of the menses occurs suddenly from some external modification or from any other cause, if, in consequence of this suppression the phenomena of pulmonary plethora are suddenly developed, if the dyspnœa become more evident, the cough more frequent, if pain arise in different parts of the chest, we should not hesitate in the treatment, it is necessary to reproduce the menstrual evacuation. Do we not know that by causing a habitual congestion in the pelvic organs we afford great relief to phthisical patients?

It is not known that M. Trousseau by provoking the formation of hæmorrhoidal tumours and flux has obtained an obvious amelioration in the accidents and arrested sometimes the progress of the malady? But at an advanced period of the disease, when diarrhœa, colliquative sweats and an abundant expectoration prostrate and debilitate the patient, would we still desire the production of the menstrual flux? He who attempts to ameliorate the condition of a patient in an advanced stage of pulmonary consumption by recalling the menstrual flux which had been suspended will most frequently accelerate the progress of the disease. The amenorrhœa is in such a case truly beneficial, at the moment when so many morbid evacuations exhaust the unfortunate patient it is useful that the normal flux should be suppressed; and although this doctrine does not conform with the opinions of some practitioners, we nevertheless persist in repeating it.

To terminate these considerations by giving them some practical interest, we ask permission to relate the facts upon whose faith Professor Rostan advises the employment of the seton in the treatment of the tubercular affection of the lungs. We have frequently heard this rigorous observer describe the history of five patients in whom the application of the seton produced an obvious amelioration and sometimes even retarded definitively the accidents of phthisis. As these important facts remain yet unpublished we believe it will be useful to give a summary of them.

1st Fact.—A lady was taken with intense pains in the right side of the chest. After a violent chill and a high fever, dyspnœa and cough soon supervened—M. Rostan detected the existence of pleurisy with effusion. An antiphlogistic treatment suited to the strength of the patient was employed, and, after six weeks an obvious amendment had taken place; the re-establishment

of the patient was complete. Some months passed without the occurrence of any pathological disturbance. Subsequently, however, some painful points were manifested anew in the right side of the chest: cough, expectoration which became every day more abundant and thicker, a fatiguing dyspnœa and general debility with emaciation supervened. M. Rostan being again called in—discovered by auscultation and percussion all the signs of a pulmonary excavation. He proposed a seton in the right sub-clavicular region—the advice was adopted. The dyspnœa yielding, the cough partly disappeared; the expectoration was less frequent, the sputa lost their opacity, the physical signs themselves became less distinct and hope was entertained for several years that the patient was advancing towards a perfect recovery. The amelioration however was not sufficient to lead to a perfect cure, and the patient perished in consequence of the progress of the tubercular affection.

2nd Fact.—A young physician of Paris was taken with hæmoptysis at periods more or less distant, he was troubled also by a cough; he came to consult M. Rostan. The chest was explored with the greatest care and no evidence of the tubercular alteration found. Demulcent drinks—freedom from fatigue and an antiphlogestic alimentation were recommended. However, the hæmoptysis, and the cough became more frequent, an habitual dyspnœa excited anew the apprehensions of the patient and he presented himself again to M. Rostan, desiring another examination. Auscultation denoted a slight diminution in the sound of the vesicular expansion in the left sub-clavicular region. A consultation of experienced physicians was called who diagnosticated the existence of tubercles in a state of agglomeration in the region indicated. The patient then suspended all labor went to Saint-Mande near Paris and a seton was put in the vicinity of the diseased part. In 1834 M. Rostan met the young man who had resumed his professional occupations and who no longer presented any pulmonary symptoms. Since that period his respiration has remained perfectly normal and physiological: this patient is affected at the present time with a white swelling of the knee joint.

3rd Fact.—The wife of a person employed in the Royal Library had for a long time experienced attacks of a pulmonary affection which threatened her life. Many physicians saw her and agreed in recognising the existence of the cavern in the superior part of one of the lungs; hectic fever and an abundant diarrhœa exhausted the patient and it was only thought necessary to employ those palliative means which are generally used when the patient seems devoted to certain death. M. Rostan was called in consultation, he ascertained also the desperate condition of the patient; he proposed however the application of

a seton—the remedy was not accepted without some hesitation, the progress of the disease was at first suspended, and in a short time hope of cure could be indulged.

4th Fact.—A labourer of tolerable robust constitution was admitted into Hôtel Dieu about the year 1832. He had been troubled for some time with cough, expectoration, and hæmoptysis and complained frequently of pains in the left sub-clavicular region. The exploration of his chest was made with great care, and it was not difficult to ascertain the existence of a tolerable vast excavation in the left sub-clavicular region and whose presence was recognised by the following signs: dullness of sound, cavernous respiration, cavernous cough, gurgling sound during the cough, pectoriliquy. This man appreciated the danger of his condition and repeated frequently that his disease was incurable. Diarrhoea, however, took place only at intervals and the emaciation was not extreme. M. Rostan advised a seton which was accordingly applied in the left sub-clavicular region. After a residence of a month and a half in the hospital, the patient left without any obvious amelioration. A year ago he presented himself again before M. Rostan to ask some relief for a periodical dyspnoea (pulmonary emphysema) with which he had been affected for several years. We explored his chest attentively. We observed the cicatrix which resulted from the application of the seton in the left sub-clavicular region which seemed to have experienced a slight depression; the sound appeared less distinct towards this region, but was augmented on the opposite side; the respiratory murmur of the affected side not very distinct, but we perceived none of the signs which had previously revealed the existence of a tubercular affection. Except the periodical dyspnoea he seemed to enjoy excellent health. His embonpoint was considerable—his colour fresh, the muscular system well developed—no fever, appetite good, and his strength sufficient to perform his labour without difficulty; we believe with M. Rostan, that this patient was cured by the seton of a tubercular affection which had already reached its third period.

5th Fact.—A woman in the Passage Choiseul, was in the most advanced stage of pulmonary tubercles without having derived any benefit from medical assistance. M. Rostan recognised a considerable cavern in one of the sub-clavicular regions. A seton was applied in the vicinity. All the accidents disappeared as if by enchantment. M. Rostan has not seen the patient subsequently and therefore is ignorant whether the amelioration persisted or the tubercles were developed. \* \* \*

*Journal des Conn. Med. Chir.*



## PART III.

## MONTHLY PERISCOPE.

*Correction.*

We are truly grateful to the editors of the Medical Examiner for promptly informing us of our having failed to give credit to that excellent and useful periodical, for the first publication of the lectures of Drs. Jackson and Gerkerd, on Epilepsy and Acute Articular Rheumatism which were reprinted in our two last numbers. It was undesigned of course, as those courteous and talented editors must at once suppose; but care should have prevented such a circumstance. Our printer has general instructions to credit every work from which we extract, and all others through which the extract may have come. Trusting to his attention to this duty, which has generally been pretty well attended to, we have failed to give that attention to the revise, which we should have done. We embrace this occasion to renew the expression of our approbation of the Medical Examiner, and our gratification in the opportunity it is so well calculated to afford, of many valuable extracts, for a Journal [intended chiefly for practical benefits, as the Southern Medical & Surgical Journal is.

EDITOR.

*Compression of Arteries. Letter from A. PETEL M. D. to A. TROUSSEAU.*

I request you Sir to insert in the next number of your journal this letter in which the compression of the carotids which you have recently proposed, will receive confirmation by two facts, one of which occurred about 5 years since; the other is recent and subsequent to the publication of the article of which you are author, in the last october number of your journal.

1st Fact.—While a student of medicine at the Hospital St. Louis, I was induced after serious reflections upon apoplexy

and cerebral congestions, to investigate the practicability of the compression of the carotids as a direct therapeutic mean. I re-examined carefully the anatomy of the artery on the cadaver and found no place more suitable for the purpose, than the narrow space situated between the os hyoides and the thyroid cartilage. Here, indeed the internal jugular vein which it is so important to avoid, the pneumo-gastric nerves and the great lymphatics are more separated than at any other spot, from the carotid artery. The experiment upon myself confirmed the possibility of its accomplishment. I ran immediately to my honorable instructor, M. Biett, to inform him of the plan and enquire if it had ever been proposed. "The English, said he, have, I think, proposed, but have not adopted it in consequence of its difficult if not impossible application. It was with an uncertain recollection that M. Biett seemed to give this response. I observed that as to the obstacles I could remove them all, and if I recollect correctly immediately compressed both the carotids. M. Biett requested me to make the necessary experiments for the publication of a memoir upon the subject, or at least to embody them in my thesis. I formed the latter resolution.

During the year 1832, while I was at Salpêtrière a favourable opportunity permitted me, for the first time, to compress the carotids. The case was that of a woman under the influence of a cerebral congestion with loss of consciousness which had continued about half an hour, accompanied with lesion of sensation and motion, unequal on both sides of the body. M. Boissy my colleague being present, I exposed my plan to him which he found new and rational. The compression had scarcely lasted a minute when consciousness began to return and was soon re-established. Sensibility and motion returned in less than an hour, but the side on which the lesion was most appreciable did not regain its primitive state till some time later. I immediately bled the patient, and the next day a new attack was arrested immediately by compression of the carotids, which was followed by a second venesection, and six months afterwards the patient was discharged without having had any subsequent attacks. This case you will find in my thesis defended in 1825, 17th March.

I will add that it is important to make a fold of the skin by pinching it up before the place where we design to make the compression, in order that at the moment when the fingers compress, the relaxation of this fold may enable the larynx to remain free.

2d Facts.—The 13th of last October I was called to visit the young daughter of M. Facon Elie. This child aged 3 years is of a lymphatic temperament, the colour of the hair however being brown. After the occurrence of several sudden vomitions

she had been taken with frightful convulsions, the two arms twisted upon their axis from without inwardly, the eyes rolled in their orbits, the pupils very contracted, the pulse quick. Sinapisms to the legs—ætherial potion. The next day, in the morning new convulsions supervened in consequence of which the child remained in a comatose state.

Two leeches behind each ear. If the coma persist, two more leeches will be applied in the evening. In the mean time I compressed one of the carotids; no effect was produced. I compressed both carotids and in less than a minute the pupils dilated and consciousness returned. This effect continued only during the time of the compression which was not persisted in for want of assistants sufficiently intelligent. Another application of leeches produced no obvious amelioration. No more convulsions; on the contrary the coma and contraction of the pupils persist, the eye-lids half closed, the eyes turned upwards, the pulse remains quick.

On the morning of the 15th I withdrew the patient from her insensibility by compressing the carotids, but it returned however several times. I endeavoured to instruct the father and other assistants in the proper mode of making the compression. They succeeded in dissipating the coma several times during the day. I arrived in the evening and found the child in the dangerous condition described above. Attempts badly made having deceived the expectations of the parents, they abandoned themselves to despair and inaction, persuaded that nothing could rescue their child from the doom that awaited her. However, I again compressed both carotids with exactness, and hope was again excited, for the pupils which were always extremely contracted, dilated in less than a minute, the eyes regained their usual expression, the child raised herself briskly in her cradle, sat down and asked for her toys. Compression was made from time to time, coma returned no more, and at the present moment, after the lapse of a month, the child is healthy.—*Journal des Conn. Med. Chir.*

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*Academy of Sciences—Compression of Arteries by M. MELAPERT.*

M. Melapert has derived great advantage from this means applied to the carotid arteries in inflammations of the brain. He believes also, that it may be employed to prevent epilepsy when announced by precursory signs. By this plan also, may be diminished the volume of an hypertrophied organ; and even a scirrhus degeneration may be arrested. This means has



the advantage of removing the organ from the influence of the blood, without exhausting the strength of the patient. He concluded by exhibiting a carotid compressor and announced also compressors for all the principal arteries which are accessible by the therapeutic plan.—*Ibid.*

A young woman of Douai was recently delivered, says *Le Libéral du Nord*, of a child, who, like the Torpedo Electricus, gave a kind of electrical commotion to the accoucheur. This electrical child is of the male sex, and of a robust constitution. He was placed immediately after birth in a wicker-cradle supported on an isolating stool with glass legs, and then gave indubitable signs of electricity. He preserved this remarkable property for the space of twenty-four hours, and to such a degree that the physician was enabled to charge a Leyden jar, obtain sparks, and perform many physical experiments.—*La Presse Médicale.*

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*Case of complete occlusion of the Vagina during Parturition,*  
by Dr. STEINBRENNER.

Catherine \* \* \* aged 27, of sanguine temperament and good constitution, had menstruated regularly from the age of sixteen, and was delivered of her first child two years ago. This delivery, according to her own account, was very laborious, but terminated naturally without the assistance of art. She declares, however, that the midwife who assisted her, produced, by means of her nails, some erosions upon the vaginal parietes. At the time of her first delivery the woman was unmarried; she married about eleven months ago: her catamenia continued every month until the period of the second conception. Her husband confesses to us that he has not been able to approach his wife completely, and that the act was always painful to her. She conceived however a second time and no accident occurred during her pregnancy. The 28th February, 1838; she began to experience the first pains of labor. The midwife who was called in, attempted to touch, but her finger was arrested in a cul-de-sac near the middle of the vagina, and she could not find the os tincæ. This was attributed to an anteversion of the womb, and the patient placed in a suitable position to remedy the supposed displacement. But the pains becoming stronger and more frequent without producing any change in the state of the parts, I was sent for at nine o'clock, P. M. At my arrival I found the woman very restless, complaining of intolerable pains at the lower part of the abdomen, the contractions of the uterus strong and frequent, the face animated, the pulse very much

developed, hard and frequent. The finger when introduced into the vagina was arrested about two and a half inches from the entrance of the vulva, by a kind of cul-de-sac without any opening, at the bottom of which was distinguished by the touch a kind of raphe or linear cicatrix directed from before posteriorly, and which was evidently the result of the adhesion of the vaginal parietes. The adhesion of these parietes was complete, for a female catheter could not be made to penetrate beyond the cicatrix. By pressing the cul-de-sac posteriorly in the direction of the axis of the inferior strait, I could feel a fluctuating mass owing to the liquor amnii which could not escape externally, and to the head of the foetus which was free at the superior strait. The thickness of the posterior wall of the cul-de-sac was perhaps two or three lines. During the pains the head engaged in the strait, but ascended after each pain to the place which it previously occupied. The woman was much agitated and the pains being strong and frequent, I only bled her to the extent of twelve or sixteen ounces, ordered an injection for the purpose of evacuating the rectum and waited for a certain time, hoping that the efforts of nature would be sufficient to overcome the obstacle by lacerating the adhesion. Two hours after I re-visited the patient, she appeared to be much fatigued, but no remarkable change had supervened. The thickness of the cicatrix was perhaps slightly diminished. I believed delay to be useless and even injurious both to mother and child, and determined to make an incision of the cicatrix. I was preparing to perform the operation when a very strong pain supervened and produced at the superior extremity of the cicatrix, a rupture sufficiently great to enable me to introduce the extremity of the little finger; the liquor amnii escaped immediately through this opening, and the head descended. I enlarged the opening with my index finger; and, aided by the pains which succeeded each other rapidly, I destroyed easily all the unnatural adhesion of the vaginal parietes, and, after a few moments, the woman was delivered without further difficulty of a healthy child. No inflammatory symptom of the vagina supervened. For fear of obstructing the locheal discharge, I did not introduce charpie into the vagina for the purpose of preventing new adhesions between the parietes of the canal. But by touching from time to time, I ascertained that the adhesion was not reproduced. The woman was delivered a few months since of a third child without the slightest obstacle.

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*Journal des Conn. Med. Chir.*

*Supplementary Menstruation, by Dr. COWAN.*

A robust woman, aged 49, the mother of five children, and whose menstruation has been regular, having experienced a sudden fright during her menstrual period, her catamenia disappeared entirely for the space of five years, without affecting her health in any appreciable manner. Two months after, she had a considerable discharge of blood from the anus. Two or three months from this occurrence she experienced for the first time, at the inferior part of the left mamma, a pricking pain, which soon terminated in a sensation of heat, manifested externally by the redness of the integuments. These local phenomena terminated finally by an evacuation in the same place, of a serous, colourless fluid, which resembled the menstrual secretion only by its odour. The discharge continued twenty-four hours, when the surface of the mamma became dry gradually, desquamation ensued, and in a few days the skin had resumed its natural appearance. A series of similar phenomena took place immediately after at the corresponding point of the opposite side, and for four years this double evacuation has constantly appeared at the menstrual periods, without any sensible alteration. The nipple is soft, but no fluid has escaped from it. The woman complains only of the itching and of the odour, sometimes intolerable, of this singular evacuation.—*Ibid.*

*A curious case of Gonorrhœa, with Malformation of the Urethra.*

A man aged 36 years, the father of four children, was admitted into one of the Infirmarys of London for a urethral blennorrhagia which he had contracted by an impure coition. On examination the urethral canal was found to open inferiorly two and a half inches behind the gland. A kind of gutter existed from this point to the gland. The prepuce was entirely deficient posteriorly, the penis destitute of the fraenum, but in its place existed a small cutaneous band, extending to the place of the meatus urinarius; the gland well formed, except that it did not present the orificium urethræ, a kind of depression indicating the point where the urethra usually opens. The patient was cured of his blennorrhagia, but the details he furnished respecting his generative power are not without some importance in legal medicine.

On first view of this malformation, it might have been said that this individual was unfit for generation. The semen could



be deposited only at the inferior and posterior part of the vagina, instead of being forced into the womb. It was certain, however, that the four children were his, the perfect resemblance between them and him, leaving no doubt upon this subject.—*Ibid.*

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*Thymic Asthma* by M. WILLIAM HUGHES.

A child of eight or nine months, affected with whooping-cough, experienced frequently sudden and alarming paroxysms of suffocation, but which continued only a few minutes. When I arrived at the place, the child seemed to have recovered. I supposed that the asthma was owing to some viscid mucus which adhered to the opening of the glottis, and that it was the disappearance of this mucus which had afforded the sudden relief. The child continued to improve, the cough diminished greatly, when a new attack supervened and carried off the little patient. On opening the body I found a hypertrophy of the thymus gland which filled the anterior mediastinum entirely, and compressed the broncheal tubes. The inferior part of the gland covered the summit of the heart and adhered strongly to the pericardium, the latter contained more fluid than ordinary. The mucous membrane of the trachea was slightly infiltrated. The gland weighed eight drachms and five grains; its colour was natural.—*Ibid.*

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*Secale Cornutum in Amenorrhœa.* By D. ENRIOTTI, Physician of Biella.

*Secale cornutum* is not only useful in parturition by stimulating the uterus when in a state of inertia, but is equally efficacious in amenorrhœa when caused also, and maintained by, a debility of the same organ. In proof the author reports four cases drawn from his practice; we shall be content to give the first one.

A. B., aged 25 years, of a lymphatic temperament and delicate complexion, married at the age of 17, was delivered favourably four times, during the three first years of her marriage: four years after her last delivery, she was tormented with violent pains, with regular intermissions about her menstrual periods, the menstrual discharge being very scanty. This state of suffering continued six or seven days, after which her health would be good for the rest of the month. Recourse was had frequently to leeches, purgatives, baths, &c. but always without success. The Italian physician tired by the inutility of all these means,

prescribed two drachms of *secale cornutum*, mixed with sugar, to be divided into eight equal doses and taken in two days; it was necessary to renew this prescription only once. The following month the menses appeared spontaneously and without pain. Since that period she has been free from all embarrassment in menstruation. The use of the *secale cornutum* is innocuous, and only produces slight nausea, but the author cautions that the remedy would not succeed, if the slightest phlogosis of the uterus existed, and other physicians, among whom are Spajrani, Marshall, and Hall, disapprove of it in the membranous or parenchymatous inflammation of that organ.

Dr. Enriotti has also twice cured leucorrhoea, by means of *secale cornutum*, and he observes that the disease was inveterate. This success is by no means astonishing. We know that certain chronic phlogoses, particularly, ophthalmia, yield to the employment of tonic remedies.—*Journal des Conn. Med. Chir.*

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*Congenital division of the Iris by Dr. MESNEL.*

The author relates three cases of this kind of malformation described by writers under the name of *Iridoschima*, and by Walther, under that of *Coloboma Iridis*. It may be complete or incomplete, single or double; it may also be hereditary. Most frequently vision remains at first in a normal state, but in some cases it is finally deranged, because the luminous rays are too strongly reflected on the retina.

Professor Walther attributes this malformation to an arrest of development, and to a retardation experienced in the closing of the anterior opening of the choroid coat.—*Journal des Conn. Med. Chir.*

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*Academy of Sciences—Centripetal development of the Osseous System; Applications to Pathology by M. SER-*

RES.

According to the new theory of centripetal development, the appearance of osseous nuclei, instead of occurring from centre to circumference, always takes place on the contrary at the lateral parts whence the ossification proceeds progressively towards the central parts of the bone.

From this principle results—

1st. The law of symmetry or the primitive quality of the central, and impar pieces of the skeleton.



Indeed, if like all modern anatomists, we consider a vertebra as the osteogenic type of the osseous system, we observe that ossification commences at first in the lateral masses and does not appear until some time afterwards in the vertebral body by two corresponding points of ossification, the one on the right, the other on the left side.

According to the most recent labours, the head and the face are considered as a repetition of the vertebral type. If we consider the cranium as a single vertebra, we observe that all the lateral parts are ossified, while the central part or the body of the sphenoid remains cartilaginous. If we regard, and with more reason, the cranium as composed of several vertebræ, we see on each of them the repetition of the same centripetal labour. Thus on the os occipitis the basilar portion is cartilaginous, while the lateral parts are already ossified. The same reasoning may be applied to the bones of the face.

2d. From the same principle results the law of conjunction, or the invariable rules which the primitive osseous nuclei obey in their coalescence.

3d. Hence results also the explanation of the diseases of which the osseous system may become the seat, if the general rule of ossification be arrested or disturbed in its progress.

Indeed, the central parts being formed from without inwardly there are at first two halves which advance to join each other, and before the junction takes place they are separated from each other by an interval the greater, the younger the embryo may be.

But if these two halves be arrested in their course by any cause whatsoever, the impar bone will not assume its normal form, and in its stead will be found an unusual opening, through which may escape the organs which the osseous system was destined to contain. It is in this manner that anterior and posterior spina bifida are formed, and also herniæ of the encephalon. By applying the same principle to the face, we explain the formation of the different kinds of hare-lip, and to the pelvis, the changes of situation which the bladder experiences.—*Journal des Conn. Med. Chir.*

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### *Manner of detecting Pus in the Blood.*

M. Mandl read a memoir on this subject to the Academy of Sciences. He remarks in the first place, that ammonia, which, according to the experiments of several Physiologists, transforms pus into a thick transparent jelly, cannot furnish a means of detecting it in the blood, because it acts on the latter in about the same



manner. The jelly, according to M. Mandl, results from a combination of the ammonia with the fibrine, for it is formed when this test is applied to the fibrine isolated; whereas it is not formed when the ammonia is brought to act on an isolated coagulum. Ammonia is not therefore more useful in detecting pus in coagulated, than in uncoagulated blood, especially as it acts upon the serum of blood mixed with pus after the separation of the coagulum in the same manner that it does upon the serum of pure blood. M. Mandl did not obtain more satisfactory results in keeping the fibrine dissolved in the serum by means of a solution of subcarbonate of potass.

The process by which M. Mandl succeeded was by beating the blood with a glass rod to separate its fibrine. If the blood which is about to be submitted to the test, upon being drawn from the vein and before it has coagulated, be pure and not mixed with pus, there will form in a few minutes upon the rod a long elastic membrane, without filaments or ragged edges, causing when pressed between the fingers the same sensation as moist gum elastic, and whose colour, though red, becomes yellowish by washing. If, on the contrary, there exist but a small quantity of pus, say 1-60, instead of a membrane, there will be formed a filamentous, ragged accumulation, devoid of elasticity, and whose softness will be proportioned to the quantity of pus mixed with the blood. These filamentous flakes are red, but by washing become whiter than pure fibrine. If the quantity of pus mixed with the blood be greater, there will be formed neither membrane nor filamentous flakes, and if the blood be left to itself no coagulum will be formed. M. Mandl regards the membrane formed by beating blood which contains a small quantity of pus, as a combination of pus and fibrine. The transformations that the globules of blood undergo when the quantity of pus is superabundant in it, or when the globules are separated from the fibrine by agitation and they are in contact with pus, are equally useful in detecting the presence of pus.—*La Presse Médicale* T. 1.—P. 128.

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### *Comparative View of the effects of different Diets on Infants.*

We have thought that the mercy and wisdom of Providence were never more conspicuous than in the manner of nourishing the infant. We have always observed that as a general rule, there was no diet, nor plan of nourishment calculated to impart to the child under ten or twelve months old, so much safety as that afforded by the female breast. We do not say *that of the*

*mother* of the child, although it is an ascertained fact that in general the milk of the mother is better suited than that of any other.

The following statistics of two extensive foundling hospitals, (i. e.) one in which the infants are nourished by the breast, and the other, in which they are sustained by the hand, confirm, in the most satisfactory manner our observations of many years, and exhibit fairly the difference in the chances of life. In the former, in which nurses milk is always secured, the deaths were thirty-five out of one hundred; and in the latter, eighty out of one hundred. Nothing can be more important to those having the care of infants than these facts. They are constantly needful—not for foundling hospitals in this country, but in *every* family; for the practice is almost universal, of stuffing the stomachs of infants with much of various compounds, as well as simples which are perfectly unsuited to their appetite and developements, as they can contain; and often much more. This custom, so prevalent, may be looked to as the most fruitful source of infantile distresses and dangers. There are more ways than one, by which non-naturals—for such we may call the spoon diets of infants) tend to produce disease and death. Truly it is often the case—perhaps most commonly, that, sooner or later the diet thus introduced into the child's stomach fails to be properly digested, and a diarrhœa—a fatal diarrhœa is too often the early consequence. This is, however, often correctable, by the prescription of the physician, if obtained early. He changes the contents of the bowels by suitable correctives, and by change of diet. But this is a less danger than another course this custom results in, which though not so common, is insidious, unsuspected, and the cause of the most sudden and irremediable danger. I allude to those cases in which the infant is found to digest promptly, and appropriate to its rapid development, a full diet of gross non-naturals, (for the infant at least.) The child appears well, grows rapidly, and is thought to afford a fine evidence of the superior excellence of hand nursing. Such a case is often held up as a conclusive argument against the rigid exactions of breast milk, by the physician. These are cases of great danger. They sometimes pass the critical periods of infancy and childhood—dentition and the usual time for worms—with safety, and all is well. But when they do, they should rather



be looked on as those who have escaped with life from a wreck, far at sea, than the boast of prudence and correct management. The general health of such is good; but there is a state of repletion and of high irritability, predisposing to the most violent acute attacks. Under this, the excitement of dentition, worms, cold, or indigestibles, (if perchance the digestive powers should become a little impaired,) presses up the action to convulsions, ending in apoplexy and death. Hence we often see such children most suddenly and unexpectedly lost in a few hours.

But the table is useful in other respects, and we therefore insert it entire, from the *Boston Med. & Surg. Jour.*—from the "*Recherches sur les Enfants trouvés, par M. L'Abbé Gaillard.*"

*High mortality of Foundlings brought up by the hand, compared with the mortality of those suckled.*

Number of foundlings at Parthenay, 153; died in one year, 54; deaths out of 100 born, 35.

Number of foundlings at X——, 244; died in one year, 197; deaths out of 100 born, 80.

Of 655 children received at X——, only 66 lived 12 years.

Struck with the enormous mortality at X——, the Abbé Gaillard ascertained that the children were equally well attended at the two places, but that at X—— the children were brought up by hand, instead of being suckled, as at Pathenay. The greater number of deaths at X—— took place in the first month after birth; and the mortality was at a maximum in autumn, a fact confirmed by many years observation at X——, and other establishments, where children are not supplied with natural food.

Months.			Births.			Deaths, 0—30 days.
December	-	-	17	-	-	7
January	-	-	17	-	-	5
February	-	-	28	-	-	3
March	-	-	23	-	-	9
April	-	-	20	-	-	6
May	-	-	18	-	-	7
June	-	-	18	-	-	3
July	-	-	18	-	-	10
August	-	-	30	-	-	26
September	-	-	7	-	-	4
October	-	-	29	-	-	22
Novemner	-	-	20	-	-	14

From this table it appears that of 244 children brought to the hospice in five years, 115 died in the course of the first month



—48 per cent.; that of 123 children born between January and June, 33 died in the first month; while 83 died out of 121, born between July and December. In the first months of the year the mortality was 27, in the last six months 62 per cent.; of 106 children born between January and June, 73 survived the first month; between July and December only 31 survived.

The mortality is raised by extreme cold; in November and December, 1829, out of 29 children admitted, 19 died in the first month after admission; in July and August of the same year, 11 died in the first month out of 25 admitted.

These facts show very decidedly the evil consequences of denying infants their natural food, and furnish another argument against the fatal practices of those heartless mothers who abandon, or refuse to suckle their own offspring.

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### *Erysipelas.*

Every fact relative to erysipelas is important, and whilst its pathology is not properly understood, and its etiology but little known, and consequently its treatment of little more curative value than its entire neglect, a greater value is attached to every thing relative to its prevention. The last Boston Medical and Surgical Journal contains the following observations relative to the occurrence and perpetuation of this disease in hospitals:

#### *Hospital Erysipelas.*

In nearly all the hospitals in which the law of cleanliness requires that the floors of the wards, occupied by the sick, shall be frequently washed, erysipelas seems not only to have been speedily generated, but also, after its first developement, to be always present, and continually showing itself on patient after patient where it was least expected. As its origin has been generally referred to the period when frequent floor-washings were considered necessary, or, rather, when the greatest amount of surface had been thus habitually wetted for a considerable time, why would it not be well to cover the floors of hospitals with painted carpets, such as are manufactured at Roxbury, of any size, which might be taken out daily to be washed, and when thoroughly dried, returned again and re-spread over the floor? The experiment seems to promise well in two respects, viz. the annoyance of floor cleansing would be done away with, and the now supposed cause of erysipelas, from the evaporation of water, holding filth of some kind, perhaps, in solution, would certainly be obviated.—*Boston Medical and Surgical Journal.*

The writer of the above article intimates that in these cases the water which evaporates from the floor after or during the washing, holds in it filth of some kind, a cause of erysipelas. This idea is not only a superficial one, but if received is calculated to dampen the spirit of research for the true causes of the disease. When we labor under ignorance, on any subject, if we would have that ignorance corrected, it is best that it should be well defined and treated. It is reasonable to conclude that in erysipelas, as in most other diseases, there are at least two sources of causation, a remote which is predisposing, and an exciting cause. The latter is very plainly taught in the above observation in private practice. It is *cold*, and more especially, this with *moisture*, which is always calculated to enhance the deleterious influences of the temperature. But it is evident that this only introduces disease of *some* kind, the *peculiar* character of which is determined by the peculiarity of the *predisposition* produced by the remote cause; and this peculiarity of predisposition is the radical point of ignorance; knowledge of which would, without doubt, add greatly to the means of determining an effectual treatment. Of a number of cases of erysipelas which fell into our hands during the last year, during an epidemical prevalence of this disease, two died; and both of these were persons recently from a residence in a much more bilious location than that of Augusta. These cases were perfectly unyielding to any mode of treatment which could be adopted; whilst others yielded more or less readily to an alterative treatment calculated to act on the various secretions, with or without topical means as dressings for wounds when they existed, &c. Here it was evident that the difference of predisposing climate was followed by a corresponding effect, as manifested in the additional violence and inveteracy of the disease. Such views as this enable us to approach somewhat more nearly to the nature of the predisposing cause, and perhaps as near to a precise knowledge of it as we possess of the predisposing cause of a bilious fever. But still, reasoning from effect, under the law, that peculiarity of cause must produce peculiarity of effect, we are still obliged to conclude that there must be some modifying influence differing from that which the general conclusion might declare, which determines the case to be one of Erysipelas and not of bilious fever.

But these difficulties exist alike in all the various forms and species of eruptive diseases.

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### *Universality of Fever.*

In his *Principles of Pathology and Practice of Physic*, Dr. JNO. MACKINTOSH, of Edinburg gives the following six propositions as embodying his own opinions, and as containing general views which are admitted by all writers whose opinions are of any value ; although some facts have been called by different names.

“1st. That the functions of almost all organs are embarrassed in fever from the very beginning, and often for days before the sense of coldness is felt by the affected person.

2d. That the blood leaves the surface of the body, and accumulates in internal organs, and that, unless they are overwhelmed, the system makes an effort to relieve herself, and certain combined phenomena take place, which are designated by the terms ‘reaction, fever.’

3d. That inflammation of all parts of the body will give rise to fever.

4th. The inflammation may supervene during fever, without being the primary cause of the febrile commotion.

5th. That the nervous system is involved as well as the vascular ; and,

6th. It follows as a consequence, if all these things be true, that the blood itself must be in a diseased condition.”

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### *Quinine in Fever.*

Perhaps there is no article in the *materia medica* of equally uniform powers, and of whose physical operation on the human system there is as little room for variety of opinion, that has been as variously used as quinine. Except those differences which good reason and fair experience enforce, as from peculiarity of climate, or location ; or the various nature of different cases, we consider this great difference as indicating the texture of mind of the different practitioners. We know of those practitioners who, in like cases, are in the habit of giving but half a grain



doses; and of others, who give ten to twenty as an ordinary portion. We think much is yet to be understood by practitioners relative to the use of this article; and that as more strict reasoning is exercised on the subject of its use—its physical powers and the pathological and therapeutical principles which make up the elements of the rigid reasoning, less of the article will be found in use. We would not be understood to object to quinine as one of the finest tonics we have at command, and more especially for the control of the paroxysmal nature of diseases; but we do believe that great carelessness and mental laziness have been indulged in the prescription of this tonic, whereby it has become a kind of routine prescription. A fair patient of ours, who, when 45 drops of laudanum were prescribed, concluded very arithmetically that if 45 drops would render a given benefit, 90 would afford a double product. We believe that many practitioners have acted on this arithmetical kind of proportion in the administration of quinine. In the days of mathematical medicine we should not have been surprised at such views; but when in these bright days of physiology, of pathology and of therapeutics, we confess that such things lead to a depreciation in the estimate value of mind concerned. We think practitioners should settle in their minds the knowledge of first principles which form the basis of correct reasoning, before they prescribe *even quinine*; for however much it may be thought a simple, innocent thing, which will do no harm if it does no good; the fact is, it is often injurious by its own operation, and still oftener so, by being used to the exclusion of agents which would be dictated by sounder reasoning.

Something of this wandering we think is observable with men of the first rank. For example, Dr. MACKINTOSH, lecturer on the practice of Physic in Edinburg, has his rule of giving three doses of five grains each, with half an hour interval, immediately before the expected paroxysm, or three grains every half hour, beginning about three hours before the expected paroxysm. Dr. MORRISON, the American Editor of Dr. MACKINTOSH's work, would not be understood as "according with the practice of administering quinine in the large and frequently repeated doses advocated by his author, (Dr. MACKINTOSH." He (Dr. MORRISON,) considers it seldom requisite to administer more than

twelve grains during the first interval, and half that quantity during the following interval, for the cure of nearly all the cases which occur. Instances however, he considers, frequently present themselves in which a larger quantity than is necessary to obtain the end, would be positively injurious; so that practitioners have adopted the safer plan of giving a grain each hour, and limiting the amount to the number of grains specified, (that is, twelve in the first interval, and six in the second.) And Drs. FORBES and CONOLLY of England, the experienced and talented editors of the Cyclopædia of Practical Medicine, and of the British and Foreign Medical Review, say that their own experience leads them to recommend the practice of American Editors, rather than that of Dr. MACKINTOSH; a practice which they have scarcely ever found fail, even with patients continuing to reside in the malarial locality which produced the disease; and that they find that half the quantity above stated, is quite sufficient in the majority of cases, to cure the endemic agues of England.

Some allowance may perhaps be made for their differences, on account of the differences of climate and locality.

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*Bleeding in the cold stage of Fever.*

“The peculiar practice of bleeding in the cold stage of intermittent fever, introduced by Dr. Mackintosh a good many years since, is well known to most of our readers. This practice naturally takes a prominent place in the chapter treating of ague, and is illustrated and supported by many new cases. Without admitting that such treatment is necessary in the great majority of cures of ague, as we know from considerable experience that the disease is perfectly and safely and speedily curable without it, we cannot deny that the practice is in particular cases indispensable, and indeed affords the only means of saving life. We must therefore always consider medical science as under great obligation to Dr. Mackintosh for having introduced this practice, and for having advocated it with such praise-worthy zeal. We are far from wishing our younger brethren to have recourse to it in ordinary cases, much less habitually, in the treatment of ague; as we are of opinion that this would be not merely useless but highly injurious; but it is incumbent on every one to make himself acquainted with the mode of its application, the principles on which it is founded, and the safety of its adminis-

tration. For our own parts, we do not hesitate to say that, had we been acquainted with this practice twenty years ago, we think we could have saved some lives which we allowed to be hopelessly lost beneath the overwhelming stupor of inter tropical ague.

The following brief extracts exhibit the pathological grounds on which Dr. Mackintosh was led to employ this remedy, and the general mode and limits of its application; but we earnestly recommend to the notice of our readers the whole chapter on this subject, and the numerous cases by which the practice is illustrated and confirmed.

*'Cold Stage.'* The first circumstance which we distinctly perceive, is diminished circulation of blood in the extremities, then a sense of coldness, and with it a feeling of weakness. These are evidences of an irregular determination of blood, by whatever cause produced; and in proportion as blood accumulates in the vessels of internal organs, their functions become impeded. The lungs shew their gorged state, by the short, difficult, and anxious breathing; by the impossibility of inflating them beyond the least degree; and by the violent dry cough which occasionally takes place. The livid appearance of the cheeks, lips, and mucous membrane of the mouth, is an additional proof of the embarrassed state of the lungs, shewing that the blood is not properly decarbonized. The disordered functions of the brain in this stage, depend, I imagine, principally upon the gorged state of the lungs, and also upon the overloaded state of the right side of the heart, preventing the free return of blood from the head. The disordered functions of the brain may also be produced by a change in balance of the circulation of the vessels of the head, independently of the state of the lungs and heart. The tremors may probably be attributed to an accumulation of blood in the vessels of the brain and spinal marrow. The sense of cold seems to be owing partly to the state of the nervous system, and partly to the state of the lungs. The pain in the head and loins, and oppression at the præcoria, may be fairly attributed to the same causes. The muscular prostration, and feeling of sinking, are not owing to actual debility, but to obstructed action, in consequence of the above-mentioned condition of organs. The proof of all which circumstances is to be found in the fact, now well known, that abstracting blood in the cold stage; will immediately remove not only the difficulty of breathing, the pain in the head and loins, the disordered functions of the brain, (when these exist,) the oppression at the præcordia, &c. but will also stop the rigors, restore the strength of the pulse, increase the heat of the whole body, and cause the sensation of cold to vanish in an instant.

'Bleeding, in the cold stage, will, in a great majority of in-



stances, cut it short; in fact, it will rarely fail in stopping the existing paroxysm, and, on many occasions, it has prevented a return of the disease to which the patients had been long subject, and by which they were nearly worn out. It is difficult to determine what quantity of blood it will be necessary to draw in any given case; sometimes it requires twenty-four ounces; I have known three ounces suffice, and, in one case, an ounce and a half produced the full effect. The larger the orifice in the vein, the greater is the chance of arresting the disease at a small expense of blood; but, in many cases, the operation is attended with considerable difficulty, from the convulsive tremors which affect the whole body. I was once successful in arresting the disease by bleeding, in a cold stage which had continued twenty-six hours; but I regard this as an extreme case. The blood sometimes only trickle down the arm, and, as the system is relieved, the stream becomes larger and stronger, till at last it springs from the orifice, and frequently before six ounces are taken, the patient will express relief from violent pain in the head and loins, and it will soon be observed that he breathes more freely. The tremors become slighter and slighter, and, by the time a few more ounces are abstracted, they will cease altogether, and with them vanish the painful sensation of cold. The pulse will be found stronger, and a gentle moisture will be observed on the body. If the patient be properly managed with respect to bed-clothes, neither the hot nor sweating stage will in general follow. Most of the patients who have been treated by myself, or by my pupils under my immediate inspection, have fallen asleep immediately after the operation; but some have even got up and dressed themselves."—*Brit. & For. Review*.

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### Medical Publications in France.

There were in 1836 more than three hundred volumes published on the various branches of medical science in France alone. These three hundred vols. if added to the pamphlets, memoirs, and other small publications, would make a total of upwards of one hundred and fifteen thousand pages; and if to these be further added the periodicals and those published during the year, the number of pages would amount to one hundred and eighty thousand, thus requiring of the student wishing to review the whole, if one could be found so courageous, to read at least 16000 pages per month, or 500 per day.—*La Presse Medecale*, v. 1.—p. 24.

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 MEDICAL INTELLIGENCE.
 

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We have received the circular of the Medical College of Richmond, Virginia. The following is the arrangement of the Faculty.

H. JOHNSON, M. D. Professor of Anatomy and Physiology.

JOHN CULLEN, M. D. Professor of Theory and Practice.

S. W. CHAMBERLAYNE, M. D. Professor of Mat. Med. and Therapeutics.

R. L. BOHANNON, M. D. Professor of Obstetrics and Diseases of women and children.

AUG. L. WARNER, M. D. Professor of Surgery.

SOCRATES MAUPIN, M. D. Professor of Chemistry and Pharmacy.

This new Medical School is opened under the auspices of the Hampden Sidney College, whose Trustees have organized and located it in the city of Richmond. Its annual session is to commence on the 1st Monday in November, and continue until the last week in March, a period of five calendar months; and candidates for the Doctorate are required to have deposited with the Dean, a suitable essay by the 1st day of January.

Although of sound political bearing, pointing the citizens of its own state to what it considers both their duty, and present and prospective interest, the circular, considering the usages of the day in such cases, enjoys an honourable exemption alike from the boasting, and the invidious comparisons and electioneering manœuvres which have too often disgraced the annual announcements of some of the American Medical Seminaries.

It is observed that the session of lectures is extended to five, instead of the usual term of four months. This is, of itself, correct. And it is very justly observed, that "the addition of another month to the ordinary session of medical lectures, (which is admitted by every physician to be entirely too short,) will enable the professors to complete the course which would otherwise be imperfect." But from experience in point, we are led to apprehend that the advantages thus offered, will *not* be duly appreciated by the medical student so long as there are other similar institutions which offer a shorter term; but on the contrary, could the majority of medical students be allowed to sway the colleges in this particular, the term would soon be reduced to two or three months. Students expect in the inconsideration of their youth, to "combine pleasure with business, and gain the rewards of industry without suffering its fatigues," and reap to themselves the profits of a costly profession without paying the tribute money necessarily due to its procurement.

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 LOUISVILLE MEDICAL INSTITUTE.
 

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This new institution has accomplished its first course of lectures. Twenty-four young gentlemen were admitted to the Doctorate. The session is from the last Monday in October, to the last of February,—a term of about four months.

The following are the present incumbents of the different chairs:—

Anatomy, JEDEDIAH COBB, M. D.

Institutes and Clinical Medicine, and Medical

Jurisprudence,

CHARLES CALDWELL, M. D.

Theory and Practice of Medicine,  
Surgery,  
Obstetrics and Diseases of Women and Children.

Materia Medica,  
Chemistry,

JNO. E. COOK, M. D.

JOSHUA B. FLINT, M. D.

HENRY MILLER, M. D.

CHARLES W. SHORT, M. D.

LUNSFORD P. YANDELL, M. D.

The price of the Tickets is \$110.

The endowment made by the city of Louisville alone, for the buildings, apparatus, Library, &c. affords an example of high-minded munificence and of a proper regard of her citizens for the medical institution, worthy of the imitation of others. And when we come to recollect that Kentucky is comparatively a new state, and Louisville a new city, \$90,000, the amount appropriated, is well calculated to put to shame the citizens of older states and cities, who have but too grudgingly appropriated a few thousand only, and left a struggling, enterprising and patriotic faculty to work out their days for future generations, or allow their institutions to lapse into ruins.

The building under contract is to be 130 feet by 66, which will afford the most ample accommodations.

Professor FLINT has started for Europe with ample means for the purchase of all things necessary from abroad, for the successful operations of the medical institute. We know of no institution, commencing with fairer prospects of success.

#### MEDICAL COLLEGE OF LOUISIANA.

We have received the annual circular of this new Institution, containing a prospectus for the session of 1838-'39. It is under the government of a President and twelve Trustees. The President is the Governor of the State, and the Trustees are all ex-professional gentlemen, many of whom we know to be of the greatest respectability.

The Faculty consists of six individuals, filling seven professorships as follows:—

WARREN STONE, M. D. Professor of Anatomy.

EDWARD H. BARTON, M. D. Professor of the Theory and Practice of Medicine.

JOHN HARRISON, M. D. Professor of Physiology and Pathology.

JAMES JONES, M. D. Professor of Obstetrics and Diseases of Women and Children.

J. MONRO MACKIE, M. D. Professor of Materia Medica and Therapeutics.

JOHN L. RIDDELL, M. D. Professor of Chemistry and Pharmacy.

WARREN STONE, M. D. Professor of Surgery.

This "was founded," (like all other Southern Institutions of the kind,) "with the express view of educating *Southern* Physicians." The session for 1838-'39 will open at the Charity Hospital, on the 1st Monday in December, and close on the 4th Saturday in March. The commencement for conferring the Degrees will be held on the Wednesday following the close of the Lectures.

The following are its requisites for graduation:—

The candidate must have attained the age of twenty-one years.

He must have been a student of medicine at least three years.

He must have attended two full courses of medical lectures, the last of which must have been in the Medical College of Louisiana.



He must present to the Dean a respectable thesis, on a subject connected with medicine, or some collateral science, by the first day of March, and exhibit satisfactory testimonials of moral character and preliminary education.

### TRANSYLVANIA JOURNAL.

According to a note addressed to subscribers, this quarterly journal is to be enlarged fifty pages, without increase of subscription price, which still stands at \$5 in advance. The ability of the Editors and Publishers to do this without a corresponding increase of subscription, stands as evidence of the fact, that the good citizens west of the Alleghany are much more liberal in the support of medical science than they are in the Southern Atlantic states.

When enlarged, as it will be forthwith, by a supplement to the first No. of the present year, the annual volume will amount to 1000 pages.

### TRANSYLVANIA UNIVERSITY.

**MEDICAL DEPARTMENT.**—The Trustees of this institution have lately elected Dr. N. R. SMITH of Baltimore, to the chair of the Theory and Practice.

The Faculty for the next season is as follows:

Anatomy and Surgery, by B. W. DUDLEY, M. D. Professor, and JAMES M. BUSH, M. D. Adjunct Professor.

Institutes of Medicine and Medical Jurisprudence, by JAMES C. CROSS, M. D. Theory and Practice of Medicine, by NATHAN R. SMITH, M. D.

Obstetrics and Diseases of Women and Children, by WM. H. RICHARDSON, M. D.

Materia Medica, and Therapeutics, by THOMAS D. MITCHELL, M. D.

Chemistry and Pharmacy, by ROBERT PETER M. D.

The lectures will commence on the 1st Monday in November next, and each teacher will lecture daily—Sabbath excepted.

Fees of the course, including matriculation and access to the Library, will be \$110. Graduation fee \$20.

It will be observed by the above, that there is scarcely a relict of the old faculty in this Institution. *Tempora mutantur.*

**DEATH BY STEAM.**—In a letter to the Editor of the Boston Medical and Surgical Journal from one of his correspondents, we have an account of a most palpable death by steam and Thomsonian Practice.

The victim in this case was a female who had been confined to childbed about three weeks previous to the operation which caused her death; but had so nearly recovered, that she went from room to room and dined with the family. The only difficulty was, that she had rather a poor appetite, and was, at times, troubled with costiveness. To the advice of some of her friends whose opinions she had always regarded, to adopt the Thomsonian method of treatment, and take a 'patent sweat,'—she consented; and accordingly began by the use of internal and external stimulants, gradually increasing the heat till she was in the most severe distress. And notwithstanding her groans, which could be heard in the road, the course was

blindly persisted in, until she breathed her last. A few moments before she died, the regularly attending physician called at the house, expecting to find her comfortable and doing well, as when he saw her last. But when he entered the room, (which he was not allowed to do till her attendants saw that she had gone,) there he beheld her a *lifeless corpse*. He did every thing in his power to restore life, but it was too late. The body was so heated that the hand could scarcely be borne upon it a few moments after death.

The woman was one of the highest respectability, and strongly endeared to her friends who now have to lament and mourn over her sudden and most deplorable death. Not the least shadow of doubt is entertained as to the cause of her death. It is acknowledged by the friends as well as foes of this method of treatment, that she died in consequence of the operation,—in fact she died before they had completed the process.

This unfortunate affair reminds us of the case of Rhodes, which was mentioned in this Journal some time ago. The circumstances are very similar, as they are also to many others which are almost daily reported verbally. But we cannot afford room for them all. Let a word to the wise suffice; the foolish have to learn at the end of severe experience.

In conclusion the reporter of this case writes as follows:

“And now, in reflecting on this melancholy accident, which from the fact that it took place within my own knowledge, has particularly awakened my feelings, I cannot but be filled with astonishment that in this enlightened age, any one can be so deluded. But such is the case, and many there are, who suffer themselves to be blinded and duped by the boasting and absurd pretensions of modern quackery. But such ignorance and absurdity cannot long conceal itself; and we may hope and believe the day is not far distant when *this* system, which originated in ignorance, and which is disseminated generally among the ignorant, will be buried deep and forever, and the true principles, those that have been the result of labor, investigation and research, will be adopted and maintained by every individual.”

This affair needs no comments.

# SOUTHERN MEDICAL AND SURGICAL JOURNAL.

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## PART I.

### ORIGINAL COMMUNICATIONS.

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#### ARTICLE I.

*On the influence of Pain in the production of Death. By*  
DR. SAMUEL D. GAMBLE, Zebulon, Pike Co. Geo.

[It will be recollected that at the instance of one of the readers of the Southern Medical & Surgical Journal, we lately requested the contribution to our pages, of an essay on the following subject:

“Is any degree of *pain*, sufficient of itself, to produce death?”

In compliance with that request, the following essay has been forwarded to us.—Ed.]

“Is any degree of *pain* sufficient, of itself, to produce death?”

If we may credit the writings of many eminent practitioners, pain, when amounting to a certain degree of intensity and duration, is of itself destructive. Difficult and protracted parturition is occasionally fatal from this cause; and even in cases in which neither extraordinary difficulty nor protraction was experienced, a fatal prostration has sometimes supervened, which has admitted of no other explanation. The delivery has been complete without any degree of physical injury, and not more than an ordinary quantity of blood has escaped from the vessels of the uterus. Yet the woman, in despite of the encouragement derived from the consciousness of safety to herself and infant, and of



comfort from the conclusion that her sufferings were at an end, has never rallied, either in strength or spirit; but after an interval, not exceeding a few hours, spent in a low and sinking state, has unexpectedly and with little perceptible alteration, expired.

It is fair to say, that these cases are by some persons differently explained. It has been argued that in a state of exhaustion a very moderate loss of blood is sufficient to induce a fatal syncope, which is very true; an exhaustion so great that even the natural and ordinary circumstances of delivery annihilated the power of recovery. But to what was the previous exhaustion to be attributed, especially where the labour, as above stated, has been neither unusually lingering nor difficult? Others have attributed the catastrophe to presentiment or mental impression, and cases have undoubtedly occurred demonstrative of the fatal effect of this depressing cause. But even where the evidence of this state has been most conclusive, I have been disposed to question its single and unmixed operation to the extent supposed; but coupled with bodily suffering and exhaustion from that cause, its fatal influence is beyond all doubt.

There is a case in which, with an unconfined state of bowels, abdominal after-pain, aggravated by pressure, augments, at no distant period from delivery, to a degree sufficient to induce the belief that puerperal inflammation exists; the pulse is accelerated, and notwithstanding its want of power, and a general expression of feebleness, the practitioner, suspicious of the pain, takes away a full quantity of blood. No satisfactory result is obtained; the pulse and the patient sink together, and a fatal coma succeeds. This is a pain not of inflammation but of irritation, and would have a better chance of relief from laudanum than the lancet.

The following case is extracted, as well illustrating the effect of acute and enduring pain from Dr. MERRIMAN'S "Synopsis of the various kinds of difficult Parturition." It is communicated to the esteemed author of that work in a letter from Dr. GOOCH.

"DEAR SIR,—The following case occurred more than twenty years ago, June 1799, to Mr. BARRETT, of Yarmouth, with whom I was then residing as apprentice. I do not relate it from my own observation, but from a manuscript account which he drew up at the time, and which, as too voluminous for your purpose, I shall try to abridge.

The patient was a lady 31 years of age, in labour with her sixth child. On his first examination, Mr. B. found a large fleshy substance, almost filling the vagina; passing up his finger between the front of the tumour and the symphysis pubis, he felt the orifice of the uterus, the anterior segment completely dilated, but the posterior could not be felt because of the tumour. Whilst he was examining, a pain came on, and the distended membranes descended between the tumour and the pubis, and almost protruded externally; another pain ruptured the membranes, when he discovered the head of the child resting on the symphysis pubis. As the head did not advance, he introduced his hand, brought down the feet, and with some difficulty extracted the child; it was born lifeless, but he persevered in inflating the lungs, and in half an hour it cried lustily. Whilst he was occupied about the child, the placenta was expelled, and after waiting for some time, the patient appearing easy and well he left her; this was at seven in the morning. At three in the afternoon he was sent for again; she had had such violent pains that she thought there was another child; but as the abdomen was flat, and the contracted uterus could be easily felt, he assured her to the contrary, and gave her an opiate. When he saw her at eight at night, he learnt that the pains had continued violently: she felt as if there was something to come away, and on examination there was discovered a soft tumour pressing against the os-externum. What could it be? He would have thought it was the uterus inverted, but it was the same tumour which he had felt in the morning before the child was born; there was no hemorrhage, the placenta had been expelled spontaneously, and the uterus could be distinctly felt in the hypogastric region. He consulted his medical friends in the town, and sent off to Norwich for Mr. RIGBY. She took an anodyne mixture; but the pains continued with violent expulsive efforts all night, and the next morning he found her with a languid pulse, and a pallid countenance; a large fleshy, livid tumour had been forced out of the vagina, and every pain brought it more and more into sight; she continued to suffer and to sink through the rest of the day; in the evening Mr. RIGBY arrived, but she had expired about half an hour before. The body was opened the next day; the uterus was contracted, but its mouth was dragged down as low as the external orifice, by a tumour which grew from it by a broad base; it was attached to the posterior part of the mouth of the womb, and some way up the neck, was of a livid colour, and weighed three pounds and fifteen ounces. The patient had borne her last child two years before, easily and naturally; but some time before her present pregnancy she looked as large as if she was seven months with child.

'This case is curious, not only as a specimen of the rare coin-

cidence of polypus and pregnancy, but as a striking proof that mere pain can destroy life. The labour-pains continued after the uterus was empty, and she may be literally said to have died of a protracted labour which took place after the child and placenta were born.

I am, dear Sir,

Yours Truly,

ROBERT GOOCH."

BERNERS STREET, March 26th, 1820.

Certain forms of mortal injury are productive of sudden excruciating and unremitting pain, such as ruptures of the stomach, gall and urinary bladders. Death ensues in these cases many hours sooner than when the pain is less intense, and before the morbid changes, which take place in consequence of the injury are so far established as to make it credible that the result is to be ascribed to their influence. Mr. TRAVERS gives an account of a case to which he had been called to a gentleman writhing with pain in the abdomen, which he had endured for the space of two hours previous to his seeing him, and described as unlike any he had ever experienced. He accosted the Doctor in these words: "Doctor if you cannot put an end to this pain, it will soon put an end to me." So true was his prediction, that in twelve hours, from a state of comparative health, (he had been at the theatre the preceding evening,) he was no more. This disease was an ulcer in the pyloric portion of the stomach, which had perforated its coats, and allowed of the escape of its contents into the general cavity.

Oxalic acid, arsenic, and some other poisons, taken into the stomach, seem to destroy life by their action on the nervous system; the characteristic expression of this action is overwhelming pain, and no organic change presenting itself competent to explain the phenomenon of almost immediate death, it is highly probable that pain has the principal share in determining this result. I shall not be understood to question the otherwise fatal effects of such injuries and noxious agents as the above, in considering the acceleration of their issue to be owing to excessive pain.

In what degree pain contributes to the speedily fatal result of the various forms of complicated injury befalling parts not essential to life, and therefore not in their nature mortal, we are only enabled to judge by the expression of suffering. But not to



speak of the difference of temperament in different individuals, it is probable that the expression of suffering, whether more or less, is often a fallacious criterion of the measure of pain actually endured; and that the operation of pain upon the system varies both with the character of the pain, and the state of the system. In all cases pain has its seat in the brain, being only a mode of sensation. It is evidently subject to varieties both in kind and degree, by the texture injured, by the nature of the injury or exciting cause, and by the state of the circulation. Every texture has its characteristic sensation under irritation. The different forms of injury and of inflammation have also theirs. There is a pain of the nerves, and of the muscles, and of serous membranes—a pain of laceration, of division, and of distention—a pain of suppuration, of ulceration, and of scirrhus—and the figurative terms, burning, pricking, shooting or lancinating, throbbing, gnawing, twinging, aching, and many others, are in constant use to express these varieties: We should, *à priori*, conclude that the pain excited by the mechanical operations of cutting, burning, and bruising of sound parts is essentially different from that produced by any action of inflammation; and that the nervous system excited by fever, or enfeebled by sickness of any kind, would receive impressions of pain widely different from those transmitted to it when overtaken by injury in a robust and healthy state. It is probable that in these contrasted states of the system, very opposite effects are produced by pain; as for example, in one case stupor, and in another delirium; and this is rendered more probable by the fact that anodyne medicines are, more than any others variable and uncertain in their effects, and that pain in different individuals, or at different times in the same, is relieved by remedies possessing qualities diametrically opposite. Such is the effect of the transient bodily pain experienced in the extraction of a tooth, or the extirpation of a wart or corn, as in some persons to produce syncope, retchings or convulsions.

The influence of pain on the stomach to excite nausea and vomiting, and on the kidneys to suspend the secretion of urine is well known. Surgeons have frequent opportunities of witnessing the first of these effects succeeding injuries and operations. The following case came under the observation of Mr. TRAVERS the senior Surgeon to St. Thomas's Hospital, &c. &c.

CASE.—A young fellow of unbroken and vigorous constitu-

tion was thrown into a dungeon at Hayti. Thumb-screws were put upon him, and a jug of water placed by his side, to which however he could not apply his mouth, owing to the confinement and acute pains in his hands. The gaoler, who came to him occasionally, lifted the pitcher to his mouth, at which times he drank freely; in the intervals his mouth was parched; he was restless but dozed a little. In this state he remained upwards of forty eight hours, during which period he never felt the least inclination to void either urine or stool. Some hours after the screws had been removed, he passed a moderate quantity of very high coloured urine, after which the secretion gradually returned to its ordinary state, and he suffered no subsequent inconvenience.

In most instances of death from violent disorganization of texture, little, if any pain is apparently endured. The shock suspends the sensibility of the system without deranging the mental faculties, although their vigour may be considerably abated. But when the symptom of excruciating and enduring pain is present, unaccompanied by the shock of violent injury, it excites and absorbs the faculties of the mind; renders the sufferer wholly indifferent to external objects, and insusceptible of domestic sympathy and the tender emotions—makes death an object not of terror, but of earnest and unceasing solicitude; and terminates life by exhaustion in a very few hours.

Pain in excess, as I have already observed, exhausts the principle of life, so that either its continuance without intermission, or the super-addition of the slightest shock subsequent to its endurance for a certain period, is fatal. SIR ASTLEY COOPER, in his lectures, relates the case of a brewer's servant, a man of middle age, and robust frame, who had suffered much agony for several days, from a thecal abscess, occasioned by a splinter of wood penetrating beneath the nail of the thumb, and who, a few seconds after the matter was discharged by a deep incision, raised himself by a convulsive effort from his bed, and instantly expired.

In operations protracted by unforeseen difficulties, as in case of lithotomy in which the stone is of such magnitude as to require crushing, the patient has begun to die upon the table. The same happens in parturition protracted by mechanical impediments, as in the case of a hydræcephalic foetus, where the nature

of the impediment has been unknown and therefore unrelieved

Pain, even of the most harrassing kind, when periodical, or relieved by intervals of ease, as in the *douloureux*, can be endured for a long time; but this gradually undermines and wears out the preserving principle, as was proved in the melancholy instance of a late eminent physician, whose remarkably athletic and robust frame became emaciated to a shadow by mere corporeal suffering. "Pains," he was wont to say, "is the greatest sedative in nature."

The first effect of intense and unremitting pain is precipitation of the action of the vascular system, with corresponding sensorial excitement; but neither of these signs is of long duration. The pulse, which has at first a strong bound or jerk, soon becomes small, tremulous and irregular or fluttering; the countenance, the features of which in the first instance are braced and compressed by a strong convulsive expression, quickly becomes relaxed, hollow and ghastly. The extreme preternatural mobility of the muscular system, indicated by great restlessness, disappears, and a state of stupifaction and indifference to surrounding objects, announces the state of exhaustion. If pain be the result of inflammation, its gradual increase prolongs the stage of excitement. If on the other hand its accession in an extreme degree is instantaneous, as from breach of texture or the operation of any destructive agent upon the system, the stage of excitement is comparatively shortlived. And when the description and extent of mischief inflicted are such and so aggravated as to produce a sensorial paralysis, evinced by partial stupefaction without absolute loss of consciousness, it so far neutralizes or renders void the effect of painful impressions, as to admit of a direct prostration of the system without reaction. A large loss of blood at the moment of injury tends invariably to this result; that is, it cuts off the stage of excitement.



## ARTICLE II.

*Remarkable case of Fibro-Schirro Cartilaginous Enlargement of the Ovaria. By G. K. HOLLOWAY, M. D., of Warrenton, Georgia.*

The subject of Tumours attracting of late the attention of a considerable portion of the medical world, induces us to present the following case as one of extraordinary occurrence; and which, so far as our confined observation and more limited experience and reading extends, is without a parallel in medical science.\* We will endeavour to give a brief description of the case so as to enable our readers to come at once to its merits under the following

HISTORY.—Mrs. BUSH, of swarthy complexion, blue eyes and black hair, about five feet eight inches high, of nervous temperament but good constitution, was what might be termed a labouring woman, in as much as she had to perform all the domestic drudgery of a large poor family, the mother of seven children, was in the month of February, 1836, in the 37th year of her age, attacked with chynanche parotidæ (or mumps;) it being washing week

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\* Some years ago we removed from the abdomen of a coloured woman who died in this city, the property of the late Hon. NICHOLAS WARE, a scirrhus tumour, in which the uterus and ovaria were so involved as not to be distinguishable—no traces resembling either of them being discoverable, a tumour, the parietes of which, when the purulent matter which occupied its central parts was removed, filled a common washing tub and weighed fifty three pounds. We took various measurements of the body of this woman before her death, but have mislaid them. We need not say that her size was enormous. The tumour had been growing more than fifteen years. Her abdomen extended beyond her knees when sitting and was enormously distended laterally. The patient had been in the habit for many years of placing her dinner and other meals thereon and eating from it, as she could not reach a table. For some weeks previous to her dissolution, her abdomen was obliged to be suspended to the joists by strong cords and sacking to sustain its weight and favour her breathing, and she remained in a standing position. Thus she remained night and day until her hitherto emaciated legs became hydropic, and so enormously swollen that they burst and discharged copiously of hydropic fluid. Apprehending sphacelus of the legs, it was then determined to tap the tumour at a point in the side of the lined alba, now greatly distended, at which a deep and obscure fluctuation could be felt. This was done and half a bushel of thick Sanguineo-purulent matter removed by a large canula. The tumour was too thick and firm to collapse—air filled the place of the matter—fever supervened, and she died three days after paracentesis. On removing the tumour, upwards of a peck more of matter was taken from the cavity.—EDITOR.

she omitted that part of her business, but the next week laboured hard at the wash-tub and got pretty wet. In the evening of that day she was somewhat feverish, and at night discovered that the mumps had returned, and in the night experienced an acute pain immediately in the region of the ovaria, or as she said, high up in each groin; which (acute pain) continued with more or less violence for a long time, with a gradual enlargement of *apparently* two hard bodies as she thought, which gradually increased in size for a very long time; attended in the first instance with apparent ascites, and in the latter part of her illness which was long, protracted, excruciating, severe and very painful, with hydrothorax.

During the major part of the time *she had no treatment, or perhaps, more properly speaking, she was allowed to have no treatment, not even that of decent HUMANITY.*

On the 15th of December, 1836, we saw her for the first time, and was not a little surprised to find a human being alive, in her then situation—she was swelled beyond and thing of which we had any idea—had *evidently* a large collection of water in the abdomen and *apparently* two hard oblong round bodies extending nearly across and meeting in the centre of the umbilical region. We immediately advised paracentesis abdominis, which was declined from the fears of our patient, as she appeared at that time very reluctant to quit this vain world. We honestly set before her all the chances for and against recovery, which were received with perfect sang froid indifference. Our advice being declined, we left her the compound powder of super tartrate of potass and jalap, with orders to use it so as to keep her bowels freely open; and recommended sleep to be procured by the judicious use of laudanum, for sleep, she could not. With these directions we made a gratuitous tender of our professional services which were declined both by herself and husband. In the spring of 1837, we believe it was in the month of April, we were again requested to visit Mrs. BUSH, and if on our first visit we were surprised at her situation, we were now more than astonished at her enormously increased and unwieldy size. On examination we found the (*apparent*) two tumours had met or rather (more properly speaking) passed each other, and so very completely filled up the abdominal cavity, that upon using the

usual and common test in those and similar cases, we could discover no collection of water, I began to think that we had mistaken the disease or its nature, if we had not been very positively confident that at the first examination we *could and did discover a fluctuating fluid* within the abdomen. We again recommended tapping as the surest means of affording relief, as the breathing was stertorous and laborious; pulse very quick and the countenance haggard in the extreme with great anxiety, but implicitly and positively gave it as our opinion that no cure could be effected or expected at this time. At present the whole system wore evident marks of general dropsy, and the inferior extremities were enormously distended and a fluid *could be heard upon turning herself in different positions*. Our advice was again rejected, but whether from choice or tutorage is to be inferred from the fact, that the common necessary comforts of life were withholden by a *most loving and affectionate HUSBAND*. *Death was not then so near at hand in HIS humble opinion as to render it certain that life would become extinct on the performance of an operation*. His victim must yet suffer a long time, although death would then have been a welcome friend. We departed and report says things continued to assume an aggravated aspect with increased violence, till the month of February, 1838, when we were again requested to visit the wretched sufferer, who was swollen beyond description. Again tapping was recommended as the only means of affording any possible chance of relief, but with this assurance, in our opinion, (for the pulse was rapid, quick, threaded and very feeble)—that the operation would now be productive of instant dissolution; but at the same time that we gave such as our opinion, we said that it was *possible* that such might not be the fact. To this Mrs. BUSH did not object, neither did her *truly affectionate* husband, but some superstitious old women coming in, said that they had “heard a Banshe crying all night,” and they were certain that if Mrs. BUSH was tapped it would kill her.

The wishes of Mr. & Mrs. BUSH were overruled by witchery and superstition, and Mrs. BUSH was left to suffer all the direful and distressing affections of tumours and hydropic diseases and the morosed imagination of a *most affectionate* husband, whose only regret was, that the Father of mercies had not sooner re-



lieved him of his constant trouble, a most truly honest and affectionate wife. On this occasion Mrs. BUSH fully opened herself to us, complained of the bad, harsh and hard treatment of her husband, but like a christian she forgave her persecutor, and requested that at her death we would make an examination of her body and report her case, if it was worth reporting, to the world. This we promised, and so far as comports with our humble ability we now perform and redeem that solemn promise.

She departed this life, as we have been informed, at 4 o'clock, P. M. on Friday, the 1st of June, 1838; and at 11 P. M., precisely seven hours after death, in the presence of Drs. WM. P. BUTT, JAS. S. JONES, E. M. PENDLETON and Students, JAS. W. WILLAER and A. PARIS, we commenced the autopsy. The general appearance of the subject presented nothing worthy of remark, if we except the appearance of the tumour, the emaciation of the chest, face, superior and inferior extremities, which were literally nothing but skin and bone: countenance haggard, hippocratic and greatly dejected. Calculating to find a large quantity of water in the cavity of the abdomen, we made an incision with the trocar and canula in the most prominent part which was about two or three inches below the umbilicus, after which, upon drawing the trocar from the canula, not a drop of fluid escaped for a second or two and then we were somewhat surprised to see a dirty, thick, curdy, tenacious, brownish fluid or pus come dropping out. Finding that the case was different from what might be, or was expected, a crucial incision was made in the usual manner. Upon cutting through the parietes of the abdomen we came to the tumour closely adhering to the peritonium and extending longitudinally from a considerable way below the pubis to above the cartilago enseformis, and laterally from the anterior superior spinous process of the ilium on one side, to that of the other, and very nearly filling up the entire cavity of the abdomen. At first view there appeared to be two tumours, but upon cutting and examining, it was discovered that there was but one tumour, but that one was somewhat inclined to be double. The external appearance of the tumour might be said to be convoluted and globular. Where the tumour was cut into it was evidently somewhat cellular, and some of those cells contained an albumen-

nous matter, some a gelatinous matter, and some contained a semi-fluid very much resembling both in colour and consistency, semen or sperm. In dissecting out the tumour we came at last, in the posterior part of the abdomen, to a large quantity of dirty looking coffee-ground coloured thick water, which was collected in tubs, and from appearance we would say twelve gallons, at least. The tumour when dissected from the body weighed twenty-one pounds. The following is the size of the tumour as measured in the presence of the attending gentlemen :

	Feet.	Inches.
Circumference of the Tumour around the Abdomen,	4	10½
From Symphysis pubis to Euseforme Cartilage,	5	8
From Vertebrae to Navel,	4	3½
Or around the body,	8	7½

The contents of the thorax abdomen and pelvis, were in turn respectively and seperably examined. In the thorax there was a large quantity of bloody water, at least two gallons. Lungs natural and heart considerably smaller than natural. In the abdomen the intestines were generally inflamed but not extensively: the spleen, pancreas and liver somewhat enlarged: kidneys normal. In the pelvis, the contents generally not diseased, the right ovaria enlarged so as to weigh twenty-one pounds: the right fallopian tube as large as a large sperm candle, the left ovaria and tube of natural size, the uterus somewhat enlarged but healthy in appearance with a patulous mouth. The corpora lutea apparently injected with venous blood, but otherwise healthy.

The abdominal contents lay entirely behind the tumour. We were promised a drawing by an artist, but causes not within our control have delayed and prevented its reception, although we used every exertion in our power to procure the same.

Such was the general necropsy which brings us to our necessarily imperfect remarks on the case.

REMARKS. From the time Mrs. BUSH was first attacked with a relapse of the mumps, there appeared to have been a violent pain in each ovaria, and an enlargement of both ovaria, when in fact but one was affected, which furnishes very strong grounds to those who adopt the doctrine of sympathy. She continued to menstruate regularly until a short period before her dissolution,

say since February last, and with the exception of the rapidly increasing size and pain of the tumours and accumulation of water, experienced no particular inconvenience. There was one thing very remarkable to every person who made an examination of the case, that all looked upon and regarded the enlargement as two tumours which could be very distinctly felt. This deception might have been caused by convoluted and globular feel and form of the tumour. When Mrs. BUSH would lie in any position in the latter part of her illness, the usual test could discover no water, but if she attempted to turn you might then very distinctly hear, plainly feel, and evidently see, that there was a large collection of fluid, and as upon using the customary test we could not hear nor discover any fluid, we were somewhat at a loss how to account for the difference. One thing is very evident, that if at any time from the first time we saw Mrs. BUSH, had an attempt been made at paracentesis abdominis, that the attempt would have been futile. Tapping could not have been perfected in the usual way or method, for if an attempt had been made to have drawn off the water, (and all persons looked upon, and considered her case as dropsy, we looked upon it as dropsy of the ovaria,) the trocar or any other instrument which might have been selected for use, would instantly after passing through the walls of the abdomen, have come in immediate contact with a tumour of twenty one pounds weight, large in proportion, and some eight or nine inches in diameter, and at least two feet in length after excision. From what we observed we are now inclined to the opinion that tapping might have been perfected in the inferior posterior part of the iliac region. But the most remarkable part of the history of the case is, that Mrs. BUSH had a single sister, who, when about the age of 37, (but who had no children,) was taken in a very similar manner to what Mrs. BUSH was, with the exception that the single sister did not have mumps. It is nothing uncommon for there to be a metastasis from the parotid gland to the mammæ, and sometimes to the uterus, but for the metastasis to be to the ovaria, is what we never knew or heard of before.

From the foregoing, it may be very plainly inferred, if not proven, that the assertion of JOHN HUNTER was correct, when he said that there was no such thing as hereditary disease, but that



in individuals of the same family, there is a strong tendency or disposition to take one disease of a similar nature.

In the case of Mrs. BUSH's sister, no autopsy or necropsy was had. The tumour was evidently of a fibro-schirro-cartilaginous nature.

We have perhaps extended our remarks beyond the usual length of such communications, and should have repressed them if we could have expressed ourselves in more concise and laconic language.

WARRENTON, July 11th, 1838.

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### ARTICLE III.

*Successful Amputation of nearly one half of the Lower Jaw-Bone, (4 3-4 inches, including one of its angles,) for Osteosarcoma.—By PAUL F. EVE, M. D., Professor of Surgery in the Medical College of Georgia.*

My attention was first called to the following case about the middle of last May, by my friend Dr. Philip S. Lemle, a highly intelligent practitioner of medicine, of Louisville, in this State. The patient is a negro woman, about 25 years of age, the mother of one child; she had experienced pain in the left side of the lower jaw-bone for ten years. Some of her friends think that she had suffered even from childhood, what was supposed the tooth-ache. The molar and bicuspid teeth of the side affected had all been successively removed, the last by Dr. Lemle, about four months before the operation. A very large tumour had gradually developed itself around the left half of the lower jaw-bone, and as it was at one time somewhat elastic at one point, had been punctured, from which however, there flowed only a few drops of blood.

Dinah, the patient, was brought to Augusta on the 26th of last May, and placed under the care of Dr. Antony and myself. In a letter addressed to us, it was stated, "that she had been

complaining for years of the jaw-ache, which had entirely resisted the usual remedies for the tooth-ache. The presumption, therefore, is, that the disease has been gradually working its ravages for a great length of time." We were particularly instructed under no circumstances to operate, without there existed a *reasonable hope* of saving her life. It was first determined by us in consultation, to prepare the patient for an operation, which had been decided upon, not only from the existing circumstances of the case, but also from the knowledge of the judicious treatment of the disease by Dr. Lemle, aided by Dr. Jenkins, an old and very respectable physician, also of Louisville. But during the night of the 29th, three days after her arrival, Dinah was nearly suffocated by the pressure of the tumour upon the larynx, and was only able to swallow after the application of ice to it. This at once hastened our preparations for the operation, which was performed on the 31st of May, and certainly not under very favorable circumstances.

Assisted by the faculty, but more especially by Drs. Antony and Newton, the operation was commenced by making an incision from the left angle of the mouth, and extending it in a perpendicular line to the thyroid gland, from which an illiptical one was made to the lobe of the left ear, including the most prominent part of the tumour in the illipsis. Upon cutting through the lip and denuding the lower jaw-bone, we found an effort of nature at separation near its symphysis. Extracting the canine or stomach tooth, the bone was divided by a small saw, half an inch beyond the line marked by the absorbents. The next object was the removal of the inferior maxillary on the affected side from its connection with the temporal bone, or of its division, provided the disease was arrested in it short of this articulation. By careful dissection, a line was perceived and defined by the absorbents in the lower part of its neck. The saw was again employed, leaving only the condyle with a small portion of the neck, and the operation was completed by detaching the insertion of the temporal muscle into the coronoid process of this bone, which was removed with the diseased mass. The section of the lower jaw-bone measured at its base 4 3-4 inches.

The outer surface of the portion of bone removed, was very

rough and denuded of its periosteum, to which latter was attached a large irregular fungous growth, varying in consistency from cartilage to fibrous structure, and extending into the skin and surrounding tissues—there being nothing in this direction like a cyst or even decided limit to the disease. The periosteum of the inner surface of the bone was not completely detached from it, and to it were also adherent large masses of fungus, which had filled the mouth, pushing the tongue to the right side, and projecting down the throat. These had an investing membrane of a delicate structure, and resembled large irregular tubercles. The artery of the lower jaw-bone was entirely obliterated, and its canal was greatly enlarged and made very rough by the action of the absorbents. At both the divisions, however, made by the saw, this bone bled freely, thereby proving that at these places it was sound and unaffected by the disease which had destroyed a portion of its body.

As the patient had fainted several times during the operation, though sustained by stimuli, and as the tumour was not encysted, it was found impracticable to remove every part which had become affected by the diseased action. We had moreover, proceeded in this case upon the principle, that the disease originated in the bone, and that if the root and body of the tumour were extracted, its projections into the surrounding tissues would necessarily be absorbed. A small tubercle was therefore, left under the zygomatic arch, together with some enlargement in the skin over the left carotid artery, and also over the thyroid cartilage.

The application of three ligatures to as many arteries, some eight or ten sutures in the skin, with adhesive strips and patent lint to fill up the cavity made by the removal of the jaw-bone and tumour, with a bandage, completed the dressing; and the patient was placed in bed, after having been on the operating table three hours. Much of this time, however, was consumed in restoring her from syncope.

At 8 1-2 o'clock, seven hours after the operation, found the system of the patient re-acting. Took at 4 1-2, a tea spoonful of common solution of morphine, which afforded much relief, and was swallowed with ease.

*June 1st., 5 A. M.* Had a pretty good night—drank freely



of cold water—nothing else. Prescribed chlorine tooth-wash for mouth. 8, A. M.—Pulse 124. Took a table spoonful of gruel, not relished; sick at stomach. Quiet the remaining part of this day.

*June 2d*, 3 1-2 A. M. Cannot swallow—fever. Prescribed ice water, warm pediluvium; head to be elevated. 8, A. M.—Pulse 124, deglutition easy. 12 M.—Has slept quietly, and desires nourishment. Prescribed gruel. 4 P. M.—Pulse 140.

*June 3d*, 2, A. M. Called to patient on account of sick stomach. Prescribed enema of salt and water, morphine and free use of chloride of soda to mouth. 8, A. M.—Pulse 120—patient comfortable. 2, P. M.—Dressed the wound, took off all the plasters—looks well—patient sitting up. 7, P. M.—Pulse 120—took a cup of tea.

*June 4th*, 7, A. M. Pulse 118—patient assists herself in bed and sits up. 5, P. M.—Has appetite; pulse the same. (It has now rained almost incessantly for the last 50 hours.)

*June 5th*, 7, A. M. Pulse 104. Dressed the wound, and continued to do so every other day. Removed to-day all the sutures. Union by the first intention took place at the lip and near the lobe of the ear. The skin in the angle of the wound near the thyroid gland sloughed, and at one or two other points where the stitches had been applied. The patient gradually improved, granulations commenced on the 9th day after the operation, and on the 10th; Dinah walked out of her room.

I have nothing particular to relate concerning the patient up to the 17th, except the difficulty, common with all negroes, of making her comprehend the importance of diet. She would insist upon solid food, particles of which were frequently found in the lips of the wound. She had also two attacks of colic, the result of eating improperly. It was about this time I perceived the skin taking on disease in the region of the pomum adami, and soon two tubercles projected from it into the wound, all of which had cicatrized except this place, where an opening was still kept up, and through which a portion of her ingesta, particularly fluids, would flow out,

On the 21st. of June, I had to leave Augusta for Charleston, to bring home a near relative, saved from the awful shipwreck of the Pulaski, and on my return, saw with regret that diseased action, apparently of the most malignant nature, had not only

commenced in the skin, but had also invaded the sound cicatrix. Kreosote, iodine, &c. were now freely employed, but seemingly to little purpose, and Dinah left on the 9th of July for the country.

I had the pleasure to hear on the 3rd of August, (more than two months since the operation,) from my patient, who is unexpectedly much improved. She has still continued the internal use of iodine, 9 drops of the tincture three times daily, and dresses the ulcer with chloride of soda. I learn the diseased skin has sloughed off, and the only tumefaction now existing is in the right sub-maxillary gland. There is no enlargement under the zygomatic arch, nor in the course of the left carotid. Her appetite is good, and she takes exercise daily.

● AUGUSTA, August 7th, 1838.

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## PART II.

### REVIEWS AND EXTRACTS.

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#### DR. GERHARD'S *Clinical Lecture on Certain Diseases of the Spinal Marrow.*

*Friday, June 15th.*—I shall, to day, make a few remarks on the subject of diseases of the spine, which are suggested by the case of a man, who furnishes a very striking illustration of this class of affections. He was admitted this morning, but was in the hospital, three years since, under my care, for an affection of the spinal marrow, the symptoms of which were pain down the spine, extending thence, along the course of the sciatic nerves, more on the left side than the right, accompanied by a slight sense of weakness, across the back and in the limbs, not, however, amounting to paralysis. This complaint had begun two years before the man entered the hospital, so that the affection dates its origin to a period five years antecedent to the present time. When the man was first in the hospital, he was treated on a systematic plan, begun up with much perseverance.

He was cupped down the spine, and along the course of the sciatic nerve, from which considerable advantage was derived. Long strips of blister were applied also in the same direction; and counter-irritation was afterwards made by the moxa, an excellent and not very painful remedy for this purpose. A single moxa was applied, every day, in such a manner as to produce a superficial ulcer, so that there were always three or four of these points of counter-irritation. The man went out relieved, and was directed to continue the use of the moxa; this he did not, however, do, and of course the remedy had not a fair chance of success, although the man was, certainly, vastly relieved by its partial application. The patient is obliged to return to the hospital, from the failure of his strength. He now, however, no longer presents symptoms of an affection of the medulla spinalis alone, but of the bones as well as the medulla; the disease having probably originated in the former texture, but, as it was unaccompanied by any distortion, it was impossible to ascertain whether the spinal chord was the original seat of the affection, or not. There is now a tumor in the region of the sacrum, and an obvious prominence of the lumbar vertebræ; and the man now walks like a paraplegic patient, supporting the upper part of his body by leaning forwards, and resting his hands upon his knees. Having lately lectured upon the subject of apoplexy, we may now find it interesting to trace paraplegia in contrast with hemiplegia, or the paralysis depending on the spinal marrow, in contrast with that depending on the brain. Hemiplegia may be the result of simple neuralgia, and is therefore not an infallible indication of cerebral disease; but there are, in such cases, numerous other signs of the nervous character of the disorder, which will prevent you from confounding it with the cerebral paralysis to which I am now alluding.

To study paraplegia to most advantage, it will be best for us to examine the symptoms of injury to the spinal marrow, resulting from fracture of the vertebræ, in which there is complete loss of motion, and of the powers of the bladder and the rectum. The effects of the excessive paraplegia, resulting from an injury of the spinal marrow, are most strongly manifested on the organs contained within the pelvis; and, in consequence of the abstraction of nervous sensibility from the parts, the patient dies from over-distention of the bladder with urine or pus, or else gives way under the irritation attending the sloughing caused by pressure in the region of the sacrum and trochanters. The case under notice has not advanced, by any means, to the condition I have just described. The patient has still some control over the powers of locomotion; but, you saw, this morning, when I directed him to walk, that he did not hobble



as in hemiplegia, but bent his body forwards, to fortify the muscles of his back, the muscles most difficult to sustain in the act of walking, and to alter his centre of gravity.

The next point to be considered is the loss of nutrition, which has taken place in the lower extremities, particularly in the left leg, which is thinner than the right. This is, of course, owing to the wasting away of the muscles, from long disuse. The change in the sensation of the limbs, is also worthy of notice; in the legs there is a feeling of pricking, or of formication, or of numbness, or the sensation which is caused when the limb is said to be asleep. This arises from the pressure on the nerves of the limb. Spasms may occur in diseases of the spinal marrow, but are not usual when they are chronic.

Let us consider the diagnosis, prognosis, and treatment of this case. First, the diagnosis.—When the man came into the hospital three years ago, we knew that he had an affection of the spine, but we could not ascertain whether the vertebræ were in a carious condition, or not. The diagnosis of disease of the vertebræ cannot be made out, with certainty, at an early period of the affection. But there are usually, as in the present instance, some circumstances, that assists very much in forming a diagnosis, although it can be only an approximate one. When the lymphatic glands of the neck and other parts are in a swollen condition, or if there be other indications of scrofulous diathesis, such as tubercles in the lungs, or that peculiar physiognomy which is so often observed in such patients, we may infer that the disease of the spine is of a secondary character, and dependent on a constitutional taint, developing itself in the bodies of the vertebræ.

The organic diseases of the spinal marrow are numerous, and some of them are with difficulty distinguished from the secondary alterations, just alluded to. Apoplexy of the substance of the medulla is a rare disease—so rare, that I have never seen a dissection of it; but membranous apoplexy, in which the blood is poured into the sheath of the medulla, I have several times witnessed; in both these varieties, the disease is sudden in its onset, and is attended with paraplegia. Where the effusion of blood occurs into the membranes, the paralysis is more extensive, and gradually tends to ascend from the lower extremities, the nerves of which are supplied from the lower part of the spine, towards the upper parts of the body; death follows as soon as the muscles of respiration are palsied. In the apoplexy of the nervous substance, the paralysis is more fixed, and, if not complete, the patient may recover. Neither of these varieties can well be confounded with cerebral hæmorrhage, in which there is nearly, if not quite always, palsy of the side of the body only. In the case of the patient just

admitted, as well as in most others who are affected with spinal paralysis, the intelligence is remarkably clear, and more bright than usual, which is another point of distinction between the affections of the spinal marrow and those of the brain. I have already stated, that we can distinguish, with great difficulty, chronic inflammation of the medulla, from the effects of scrofulous disease of its bony covering.

The prognosis, in this case, is not difficult. From the fact of its dating its origin to five years since—from its having been partially arrested, and now returning with aggravated symptoms, there is, we fear, but one termination for it—it will probably end in death. But before the disease of the vertebræ is established, if the early symptoms are combated, there is a tolerable chance of success; now that evident distortion has taken place, indicating extensive bony disorganization, the affection is almost necessarily fatal.

The treatment, proper in this case, applies to all chronic inflammations of the spinal marrow. They are to be managed on the same principles as those of the brain; the treatment is, however, more local in its character. Purging should be employed with a view to act upon the local disease, as a revulsive; instead of diminishing, it rather keeps up the general health. Rest is essential: hence, as in cerebral apoplexy, I would avoid stimulating the organ with strychnine, or remedies of the sort, unless in the very chronic stages; keep it perfectly quiet, by placing the patient on his back, and retaining him there, rigorously. If the symptoms are tolerably active, cupping must be freely employed; but only in a moderate way, if the affection be altogether chronic. After local depletion by cups and leeches, remedies of a more permanent character must be used. There are several which may be tried, and a preference given to that which is found to answer best, in the particular case. From blisters I have derived but very slight advantage. Moxas I have found decidedly the most useful, though I cannot say that they are always permanently serviceable. They have several advantages;—they produce the same good effects as the caustic potash, or setons, and are much more moderate in their action, and less irksome to the patient; they likewise, from the pain they produce, stimulate the nerves in the least injurious way, being thus of double service—as a counter-irritant and an excitant. They are to be applied frequently, say one every day, and on half-a-dozen different places, which may thus be kept sore; their application being continued, until they produce vesication, but not deep ulceration. In this case moxas were used for two or three weeks; and, in other cases, I have used them for months. If they give intense pain, they may be given up, and other remedies tried, as the caustic, setons, and blisters.

Acute inflammation of the spinal marrow is an affection of rare occurrence. The most unequivocal case I ever saw which terminated fatally, took place at the Children's Hospital at Paris, in a child six or seven years of age. The little girl was very intelligent, and could give a very good account of herself. She had received no injury, and there was no obvious cause of the disease, but the constitutional tendency to it, which was evident from another sister soon after entering with nearly similar symptoms. She entered the hospital, after having been ill for three days. At this time there was stiffness and flexion of the limbs of the upper and lower extremities, which could not be extended without great pain, and this was the only uneasiness felt; when the limbs were touched she did not complain. This contraction continued to increase till death, and was always greatest in the upper extremities, the arms being bent to an acute angle, at the elbow. Upon examination after death, the upper portion of the spinal marrow was found in a softened condition, particularly, just below the crossing of the corpora-pyramidalia. The softening involved both the anterior and posterior portions of the spinal column, thus accounting for the affection of the nerves of motion and sensation according to the theory, at present generally received, which, however, some recent experiments appear to call in question.

The general symptoms, then, of acute inflammation of the spinal marrow, are numbness, pain, stiffness, and rigidity of the muscles, supplied from nerves coming off below the part affected, and if the inflammation is towards the upper portion of the spinal marrow, the contraction is more obvious, in the upper than the lower extremities. If in the case to which I have alluded, the pain had been unaccompanied with contraction, I should not have deemed it a necessary symptom. The functions of the alimentary canal were not altered in a remarkable manner. The appetite was good, and the powers of urining not impaired, although this cannot be generally the case. The integrity of the cerebral functions, in this patient, sufficiently showed the spinal marrow to be the origin of the symptoms.

The treatment must depend upon the activity of the affection, and the period at which you are called to it. The case of the little girl was not so actively managed in the French hospital, as it would have been by our practitioners. There the treatment was confined to some remedies of a local character; but with us, it would have been looked upon as an affection of a most severe grade, (for the patient inevitably dies, as soon as the disease extends to the neck and the functions of respiration become affected,) and we should have treated it accordingly. A patient of a strong constitution, I should bleed freely, and follow the bleeding up by cupping over the part affected, to an almost



indefinite extent. If the patient be feeble, the depletory treatment must be somewhat modified, and confined to leeching. After this plan has been pursued for several days, it is proper to attempt to moderate the local symptoms, by blisters, moxas and purging, the latter of which, however, is to be looked on as a mere adjuvant. This affection is not a rare one in children; like most diseases, however, it assumes something of an epidemic character, and you will have, at certain periods, a number of cases together, and may afterwards not meet with one for several years.

There are a number of affections of the spinal marrow, into which I shall not enter in this course—some of a very tangible character, and others, protean in form and nature. Within a few years past, it has been the fashion to ascribe to affections of the spinal marrow, an almost endless variety of symptoms—some with propriety, but others on very inadequate grounds. This subject was investigated, some years since, by Tate and Teale, of Yorkshire; and the results of their researches attracted to it considerable attention. Three or four years ago, these complaints were more common, certainly, than at present, and, hence, some of the interest with which they were regarded, has subsided.

Under the term, spinal irritation, which has also been given to the more indefinite class of affections, I am disposed to include two undoubted varieties of disease; first, all cases of neuralgia, originating in the spinal column, and extending along the course of one or more nerves, and in which there is pain on pressure over the corresponding vertebræ. If the pain be greater over the vertebræ, than in the muscles affected; if you have, for instance, pain over the scapula, and upon pressing the spine, you find it more tender than in the muscles of the scapular region, you may at once conclude that you have neuralgic rheumatism. Secondly, I use the term, also, in those cases of more obscurity, in which you have pain in a circumscribed spot, at the anterior part of the chest, near the heart, or sometimes, although rarely, at the same point of the right side. In these cases, if you find a tender spot in the vertebræ, corresponding with this cardiac pain, it is fair to infer the existence of spinal irritation. The diagnosis becomes more clear, if you have also pain on pressure, along the course of the intercostal nerves; although such an extension is by no means necessary. Many are disposed to account for other functional disorders, by tracing them to spinal irritation, cases of palpitation of the heart, in which there is no anemia, and where there is pain on pressure over the vertebræ, may be referred to this cause. If the latter symptom be wanting, you can decide only by the results of treatment.

Affections of the alimentary canal are also traced to the same

cause. You may recollect the prevalence of dyspepsia all over the country, some years ago, when lawyers, clergymen, and all who pursued sedentary occupations, as well as some who led a more active life, were uttering universal complaint on this subject. Much of this undoubtedly depended upon spinal irritation: how far the spinal marrow was connected with the symptoms, was to be known from the evidence of pain on pressure, or by the success of the after treatment. Disorders of the lower bowels are never ascribed to spinal irritation.

Some are disposed to deride the very name of spinal irritation, as applied to the last mentioned disorders; but I think it may still, with propriety, be given to certain groups of symptoms, for want of a better term by which to designate them. Although they are not now met with, so often as they occurred a few years ago, they still present themselves in sufficient numbers to claim a fair share of your attention.

There is one other affection, in which the spinal marrow sometimes plays an important part. This is acute articular rheumatism, in which we find another element in addition to mere neuralgia. In articular local inflammations, if you can detect pain on pressure along the spine, and if the local pain is at the same time increased, cups along the spine, as recommended and successfully used by Dr. Mitchell, of this city, will often prove of signal service.

The diagnosis of the various disorders, dependent on irritation of the spinal marrow, is not a little difficult; and, from the kind of enthusiasm with which the researches of Teale and Griffin were received, ludicrous mistakes are sometimes made, in attributing to this cause, important functional disturbances, in which the spinal marrow is not at all affected, or only in a slight and secondary manner. I shall point out some of the modes of discrimination, in these cases. In affections of the chest, of the lungs or heart, physical examination may be resorted to, to determine all points of doubt. In disorders of the stomach, the best test of the presence of gastritis is afforded by the effects of food, which proves irritant as soon as taken, in chronic gastritis; whereas, in neuralgia, although the ordinary aliment may occasion some inconvenience, slight stimulants, as wine, are both salutary and proper.

The pathology of the class of affections which we are examining, is unknown. The probability is immense, that there is no pathological alteration in the organ, but that the disturbance is altogether functional. Besides, the disorder generally disappears so long before death, as not to allow us to detect any morbid alteration, that may have previously existed. If to this we add the great difficulty attending the pathological examinations of the spinal marrow, we can readily account for our

ignorance on the subject. Physicians, however, generally treat these affections, as if they were known to be inflammatory, by local depletion, and, afterwards, counter-irritation by blisters, tartar emetic, and croton oil. The tartar emetic is a good remedy for this purpose, but a painful one; the croton oil is less painful; and blisters cease to give much annoyance, after one or two applications. This mode of practice is found by experience, to be the most successful, and in our ignorance of the precise nature of the lesions, we cannot do better than pursue it.

I had lately a marked case of obvious functional disorder of the heart, the symptoms of which disappeared, after one or two blisterings to the back. Another similar case, was that of a woman in the hospital of the almshouse, who had been for a long time unavailingly treated for gastritis, and severe pain in the region of the stomach, which were relieved at once by one or two cuppings to the spine. About the same time, a friend of mine, a young lawyer, of high promise, offered a well-marked example of a similar affection. He had been treated for it, with little success, by a country physician of skill and experience, when he applied to Professor Jackson, who, just at this time, had become acquainted with the then novel subject of spiritual irritation, and, a few leeches and counter-irritation to the spine, directed by him, effectually relieved the symptoms, which did not return. This simple treatment will often succeed, without resorting to tartar emetic or other irritating remedies.

In cases of organic diseases of the heart, complicated with spinal irritation, Dr. Marshall, who has written an interesting treatise on this subject, recommends the direction of our therapeutics to the cure of the latter. I have seen many such cases, and have often succeeded with great facility, in so far modifying the symptoms, that they have ceased to annoy the patient; for if, in these cases, you remove the functional disorder, the organic lesion often proves of little injury to the comfort of the patient. A gentleman now residing in Washington, consulted me a few months ago, in an analogous case, in which there was considerable valvular disease, with extreme functional disorder of the heart. I succeeded in removing the latter symptoms, which were in this instance, treated without irritants to the spine, and the patient is scarcely conscious of the heart disease. Now, in such cases, the local remedies addressed to the spine, often prove of extraordinary advantage. In diseases of the lungs, less success is to be anticipated, than in those of the heart or stomach. Whenever you find irritation distinctly extending from the spine to the viscus affected, the success of the spinal treatment may



be looked upon as almost certain, and relief will often be almost instantaneous. Last summer we had several cases, illustrative of the good effects of this treatment, and, although none offer themselves at this time, we may look for their not very distant return.

These brief remarks will prove sufficient for the purpose for which they are intended—to call your attention to an important and very troublesome affection. For fuller details on the subject, which are not now demanded, I refer you to several capital treatises, perhaps a little ultra, in some of the points which they urge. They are those of 'Tate; of 'Teale, on Hysteria; of the Messrs. Griffin, of Ireland, a more complete and distinct work, in which the protean forms and transient character of these affections, are amply discussed and illustrated by cases; that of Marshall, of Scotland, and, afterwards, of the North of England, (not Marshall Hall,) a valuable work, which has been republished in this country, and from which you can extract much that is excellent, allowing for some exaggeration of views and facts. I say exaggerations, for others have certainly not been so successful, in the management of neuralgic affections, as this author seems to have been.

Should many other nervous affections present themselves during the course of the summer, I shall take them up; but it is probable that our attention will be occupied with more acute and violent affections. Besides, the excellent series of lectures which were given by Dr. Jackson, upon this subject, during the past winter, (which you will find in the earlier numbers of the Medical Examiner,) renders it less necessary for me to enlarge upon the subject of these diseases.—*Medical Examiner.*

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*Eclectic Journal of Medicine for May, 1838.*

This valuable periodical continues its monthly appearance with great regularity; and its pages shew by their judicious selections and observations the good ability with which it is edited. This work promised well in the beginning, nor has it failed to maintain amply its first promise. We hope it is liberally patronized, not only on account of its able editor, but because it is a work which every medical man should receive—no matter how many other journals may receive his patronage. The number before us begins with an extracted review from the Medico-Chirurgical Review, of the works of COLLES, HUNTER and DEVEGIE,

on the venereal disease. This review contains a very fair comparison of the English and French views of the disease and of pathological principles generally; with the judicious observations of Dr. JOHNSON, the Nestor of the profession at present. We noticed this subject briefly on a former occasion. The next article is an extract from the *Edinburg Medical and Surgical Journal* for January, 1838, and is an article from Dr. WARDROP's work on Diseases of the heart. It contains an account of a new mode of increasing the heart's action; which for its practical value we extract at length.

*A new mode of increasing the the Heart's action—For restoring the powers of life in persons apparently dead from drowning, or in Syncope.*

Some years ago I had occasion to bleed a lady, and abstracted upwards of thirty ounces of blood, whilst she was in bed. About three hours afterwards, on attempting to rise, she fainted. The family being in great alarm, I was sent for, and when I got to the bedside, I found that another practitioner was in attendance. He said to me "your patient is dead." The basin of blood remained still on the table, and I was in great uneasiness on account of the lady's condition, and I confess I also dreaded the effect of the largeness of the bleeding. Spirits of ammonia had been sent for, but deglutition was suspended; a flexible tube was sent for, and I became very much alarmed.

In this state of anxiety of mind, and without having any precise purpose in view at the time, I desired her husband, who was almost frantic, to assist me in raising up her head and shoulders from this supine position. She gradually resuscitated, and in three or four minutes she became quite revived. I again visited her late at night, when she said she had great pain in her arms, and she thought that her husband and I had grasped her arms too tightly. On returning home and reflecting on the circumstances of this case, I concluded that pressure (quite unintentional, however,) on the brachial arteries by impeding the circulation and causing congestion, must have excited the action of the heart.

On making the experiment, I found, that by pressing the brachial artery, the pulse, though it gradually beat faster and faster, continued still small and thready, and when the pressure was removed, it became very full, and continued so for some time.

I can at any time raise the pulse in this way. On repeated trials, I find that the pulse being first felt so as to ascertain the progress, it runs nearly thus:—

In 3 1-2 minutes it rises from 68 to 74	
5                    -                    -                    -                    68 to 78	
7                    -                    -                    -                    68 to 80	

So that in seven minutes, twelve beats in the minute can be gained. Is there any medicine known which can do this in so short a time? How valuable, then, is this fact!

It was only yesterday that an eminent anatomist called on me. He doubted the fact. I convinced him by stopping the circulation in his right arm, when in nine minutes his pulse rose to fourteen beats in the minute. I measured his pulse, it was,—

75, and in 3 1-2 minutes it rose to 83	
in 5                    -                    -                    -                    85	
in 8 1-2 or 9                    -                    -                    90	

As the laws in the animal system sometimes call in the act of pressure, I conclude that to imitate nature in that respect, and in other instances of disease, especially in such as proceed from great exhaustion, they may be (after the knowledge of this fact) successfully treated.

Before I conclude, I have only to say, that if the tourniquet was known formerly to be of use in disease, I can surely affirm it is not used at the present day, nor for the thirty-six years that I have been in practice in London, either at public hospitals or in private practice.

If the patient is thin and delicate, the force of the operator's thumb will be sufficient to produce the necessary pressure. But if the patient be more muscular, a tourniquet must be applied. It may be objected by saying, "but where is a tourniquet to be had?" A simple and effectual one can be made of a neck-cloth or pocket-handkerchief, and a bit of stick, a pencil-case, or the handle of a pocket-knife.

I have, on this occasion, pointed out the good effects to be derived from this practice, as regards a sudden stimulus to the heart when in case of suspended animation; in cases of persons apparently dead from drowning and in syncope. But much is left to be said of its use in various other instances, where the sanguiferous system requires quick attention, and a remedy fortunately always at hand.—*Edin. Med. and Surg. Journ.*, January 1838.

The next article, from the pen of Dr. ROBERT LEE, of the British Lying-in Hospital, and taken from the London Medical Gazette, is a brief history of the rare anomaly of a female who had four mammæ and nipples, all of which afforded milk. 'Two of them are about the natural site, and the others are a little above them.



"The author considers the above case as furnishing one of the best examples on record of quadruple mammæ in the human subject, and cites from several foreign authors some of the most striking instances he has met with of the same malformation: the cases present no material deviation from the one under consideration. The author remarks, that in some women only one breast has been developed; others have had two nipples placed on one mamma; and a few individuals have had three breasts, two in the natural situation, and a third between them. Only one case has been recorded of five mammæ in the human subject."—*London Med. Gaz.*, Jan. 1838.

The next article consists of a report of cases occurring in the Clinique of M. LOUIS, by HENRY CURLING, Esq. This report is from the London Medical Gazette for January 1838, and is of practical value; especially as it contains the practice of M. LOUIS who is now one of the best pathologists of France. The following cases are given:

"ENTERITIS—*Recovery*.—A female, aged 30, of a weak constitution, was admitted into La Pitié, under M. Louis, April 12th. She had been attacked on the 2d instant, about noon, with a rigor, which lasted two hours, followed by increased heat. She had likewise vomited, but had neither headache nor giddiness. These symptoms were soon succeeded by pain in the abdomen and diarrhœa, which, with the fever, have continued to the present time. The pain has been confined to no particular spot. On the second day of her illness she had considerable nausea and vomiting, attended with slight pain in the epigastrium, to which she had never been subject. On the third or fourth day, cough was added to these symptoms. For the six or seven days preceding her illness she had a little tinnitus aurium, but it has since ceased, except when she coughs. She has one child; and menstruated about three days ago.

April 12th.—Pulse 94, full; yesterday evening 100; skin hot; eyes hollow; the inferior lip covered with a white crust; countenance expressive of weakness, but there is no appearance of stupor; memory exact; the circumference of the tongue red, white and villous in the centre; nausea increased by drinking; complete anorexia; four stools yesterday; no pain in the abdomen. A little below, and to the left of the umbilicus, there is a swelling about two inches in width. It is hard, fixed, gives no sound, and is not at all painful; respiration quite natural.

*Diet. Ptisan, Oij. Extract. Opii, gr. i.*

15th.—Feels better, and is in good spirits; has eaten some bouillon without being followed by nausea; pulse 100, regular;

heat natural ; no pain in the epigastrium ; the tumour is more moveable, and is very close to the neck of the uterus, which is not, however displaced ; tongue white and villous ; has had one stool.

All these symptoms gradually subsided, with the exception of the diarrhœa, which persisted to the 22d inst. A few days after, she left the hospital convalescent.

**ENTERITIS—Recovery.**—A man, aged 53, of a moderately strong constitution, was admitted under M. Louis, March 22d, having been ill seven days. His illness commenced with pain in the abdomen and diarrhœa, which have continued to the present time. He has had as many as thirty stools in one day, but no tenesmus. The matter voided was often compared by the patient to white of eggs, and was frequently mixed with blood. He has had considerable fever, attended with perspiration and headache. He ceased working from the commencement, but has not kept his bed. He has never had a similar complaint.

March 23d.—Countenance natural ; tongue moist ; thirst moderate ; has vomited twice ; six stools yesterday ; abdomen well formed, sensible to pressure ; the pain does not follow a transverse direction. Pulse 52 ; no fever ; subcrepitation posteriorly and inferiorly on both sides, but especially on the right.

*Tr. Opii, 3j. in injectione administ.*

The diarrhœa ceased the second day after the administration of the injection, and in three or four days he was quite well.

**TYPHOID FEVER WITH ERUPTION—Recovery.**—A young man, aged 23, of a strong constitution, with black hair and eyebrows, well developed, came to the hospital March 9th. For six or seven days previous to his illness he had had diarrhœa, but had paid no attention to it. He has been obliged to keep his bed the last fortnight. His illness commenced with shivering, cough, and headache, followed by excessive heat and great prostration of strength. The diarrhœa has continued except during the last two days ; the fever has not ceased, but he has no return of the rigors. Anorexia and tinnitus aurium are to be added to the symptoms. The sight has been troubled, and he has felt giddy ; but he has had neither pain in the abdomen, nor epistaxis.

March 10th.—Lies on his back ; face covered with red spots, and has an expression of anxiety ; answers questions rapidly and sensibly ; sight troubled ; eyes injected ; nostrils dry ; feels giddy ; tongue dry in the centre, moist and natural in its circumference ; no meteorism ; no gargouillement in the right iliac fossa. The chest, axilla, and abdomen, covered with numerous vesicles, half a line in diameter ; perspired a little in the night ;

several rose-coloured spots are seen on the chest and abdomen; pulse 96 yesterday evening; 100 this morning. A bitter taste in the mouth; no nausea; respiration vesicular; much thirst.

*Antim. Tartariz. gr. j. in die sumend.*

11th.—Countenance less injected; has not vomited; pulse 92 yesterday evening, 88 this morning; tongue dry in the centre, but trembles less; tinnitus; fresh vesicles on the chest and neck; desquamation of the skin; four stools; spleen cannot be distinguished.

*Eau de Seidlitz, half a bottle to be taken during the day.*

On the 14th the sudamina were still more numerous, and confluent, particularly about the axilla. The tongue began to clean, and to become moist.

On the 17th he felt a little appetite, and from this period he became rapidly convalescent.

REMARKS.—These three cases afford examples of two diseases, enteritis and typhoid fever, which by inattentive observers are often confounded. Though several symptoms of typhoid fever were absent in the last case, those that were present were sufficient to announce its nature. The diarrhoea and excessive prostration of strength at the commencement, the headache, the giddiness, and tinnitus, the presence of sudamina and rose-lenticular spots, could, when combined, be attributed to no other disease.

In like manner, in the second case, the nature of the disease was denoted by the very numerous stools, the little fever, the pulse being only 50; the little prostration of strength (for although the patient ceased working the second day, he never kept his bed); the advanced age of the patient (53); the absence of giddiness, tinnitus, and spots. These symptoms are only observed in enteritis. Pain in the abdomen and diarrhoea, though sufficiently frequent in typhoid fever, are still more constant in enteritis. Headache occurs in forty-nine cases out of fifty of fever, but in not more than two of the same number of cases of enteritis. Among a great number of cases of enteritis observed by M. Louis, only one quitted his work the day of the attack, while the contrary happens in typhoid fever. The rose-lenticular spots, the sudamina, epistaxis, meteorism, are rare in enteritis: not more than one in twenty-three had epistaxis. Vomiting is also rare in enteritis; but it does not often occur in fever before the eighth or ninth day, the period when most of the complications of fever are developed. Enteritis may occur from infancy, may be repeated several times, and may complicate other diseases. Typhoid fever rarely attacks very young or very old indi-



viduals. When M. Louis wrote his work on Fever, 25 was the mean age of the cases he had observed. From a more recent analysis of a still greater number of cases, he finds 23 to be nearer the truth. He has never seen it after 60 years, and very rarely after 50. M. Louis has only seen five fatal cases of enteritis; and, considering its frequency, he does not view it as a dangerous disease.

Though it is impossible to confound well-marked cases of enteritis and typhoid fever, yet as a disease is more denoted by the combination of certain symptoms than by the presence of any one particular sign, so, when some of these symptoms are absent—when they occur in a different order, the diagnosis is often rendered difficult. This occurs in enteritis and typhus fever, slight cases of which are often confounded. And the distinction between them is more important than is generally thought, particularly as regards the prognosis. All the cases of perforation of the intestines which have fallen under M. Louis's notice were at the commencement very mild, and comparatively trifling.

In the first case the diagnosis was doubtful: the disease commenced by a shivering fit, fever, diarrhœa, pain in the abdomen, succeeded on the second day by epigastric pain and vomiting, and on the fourth by a little catarrh.

The diarrhœa, the depression of strength, and the vomiting, would seem to indicate fever, whilst the slight headache, the absence of giddiness, of spots, and of pain confined to the right iliac region, would rather indicate enteritis.

A white exudation on the mucous membrane of the mouth was considered by the ancients as a very fatal sign; but that it is not always so the first case proves. It certainly is only developed when the patient is very weak, whether from the effects of an acute or chronic disease, and depends upon an inflammation of the mucous membrane. In like manner sudamina are often looked upon as a very dangerous symptom, whereas only one-half of the patients in whom this symptom is present die.

**TYPHOID FEVER—ERYSIPELAS OF THE FACE—ACUTE PERITONITIS FROM SUPPOSED PERFORATION OF THE ILEUM—**  
*Recovery.*—A cook, aged 33, had resided in Paris three weeks, when on attempting one morning (March 22) to get up, she was attacked with vertigo, pain in the head, buzzing in the ears, and chilliness, which obliged her to keep her bed. She arrived in Paris in perfect health, and had not been exposed to privations. These symptoms continued til the 25th, when, being obliged to go out, she fell down from weakness. The next day she vomited for the first time, and had diarrhœa, with pain in the abdomen. On the 31st she entered the hospital, having walked there without difficulty, supported by two persons.

April 1st.—Memory exact; lies on her back; eyes sunk; cheeks of a livid red colour; vision troubled; tinnitus aurium; great prostration of strength, but not complete; tongue dry and red, not pointed; pulse 120, small and feeble; great thirst; abdomen soft; the spleen cannot be distinguished; pain in both iliac fossæ increased by pressure; no pain in the epigastrium; twenty stools yesterday; respiration healthy.

*Diet: ptisan. Antimon. Tart. gr. j. in die sumend.*

2d.—Has had three stools, and vomited four times. Yesterday afternoon the nose became red and swollen; the left cheek soon became in a similar state, and during the night the right cheek. The erysipelas extends as far as the chin; the occiput is painful when pressed, but is not œdematous; pulse 112; other symptoms continue the same.

*Eau de Seidlitz, half a bottle.*

6th.—The erysipelas has subsided considerably, and there is abundant desquamation of skin; her menses returned yesterday; no headache; pulse 104; no thirst; feels very weak.

7th.—At half past six yesterday evening she was attacked with an acute pain in the right iliac fossa, accompanied by nausea and vomiting and rigors. At midnight the abdomen was universally painful, the pulse 116, weak and feeble. The pulse is now 140, and very small. Some laudanum was immediately given her. The tongue is projected with difficulty; the cheeks are of a deep violet tint; 40 respirations in a minute; she cannot bear the least pressure on the abdomen; pulsations of the heart imperceptible; two stools after a lavement; only took three spoonfuls of soup and a biscuit yesterday.

*Three oranges. Aect. Morph. gr. j. in Mist. Mucilagin sum. Strict diet.*

8th.—Pulse 152 yesterday afternoon; now 116. Countenance improved; no nausea; circumvolutions of the intestines can be distinguished; abdomen soft, and without pain, except when pressed; no stool. Tongue slightly moist; red in its circumference) white in the centre.

*Three lemons, and a little ice. Rep. Mist.*

10th.—Cheeks red; abundant desquamation; no pain in the abdomen, except in the right iliac fossa; tongue red, not very moist; small white spots on the mucous membrane lining the lips, and a white exudation at the roots of the teeth.

*Rep. Mist. Fomentations to the abdomen.*

For several days she continued in a very precarious state, the pulse being very quick and small; but by persevering in the

administration of opium, and in complete abstinence from all food, she was, towards the end of the month, enabled to get up, although very weak. In the course of another month she left the hospital.

REMARKS.—The symptoms at the commencement bore some resemblance to those of ramollissement of the brain. Indeed, it has twice happened to M. Louis to confound typhoid fever with that disease, which he has seen at the commencement attended with no other symptom than excessive prostration of strength. On the fifth day the nature of the disease was announced by the diarrhœa, abdominal pain, vomiting, &c., although many other important symptoms of fever were absent. It is by no means rare to see erysipelas of the face developed during the course of a typhoid fever, whereas it is very rare to see erysipelas preceded by cerebral and abdominal symptoms for twelve days; so that this complication would rather tend to confirm the diagnosis. On the 7th instant evident symptoms of acute peritonitis were present, which M. Louis believed to be caused by a perforation of the small intestine caused by ulceration, and situated about the junction of the ileum with the cæcum. Peritonitis so rarely complicates acute diseases, that it may almost be laid down as a law, that if in the course of an acute disease there suddenly comes on a pain, if this pain is increased by pressure, and accompanied by a rapid alteration of the features, or more or less promptly by nausea and vomiting, a perforation of the intestine exists. The probability becomes still greater if the disease is typhoid fever, as it is always accompanied by some degree of ulceration of the intestines. This is the first case of perforation of the intestine, occurring in the course of a typhoid fever, which M. Louis has seen recover. Would not the peritonitis be considered by many physicians, and perhaps justly so, as a metastasis of the erysipelas of the face?

SCIRRHUS OF THE PYLORUS.—*Death*.—A sempstress, aged 69, previous to the month of November, 1836, enjoyed excellent health; her digestion had always been good; she had never experienced pain in the epigastrium; had always been in easy circumstances, and enjoyed the necessaries of life without having committed any excess in drinking, &c. &c. In that month she was troubled, for the first time, with a pain in the epigastrium, and her appetite at the same time diminished. In December she was attacked with frequent vomitings, and often brought up her food thirty-six hours after eating it. On that account she took hardly any nourishment, and became very thin. The pain in the epigastrium increased during the months of January, February, &c., and came on generally two or three hours after a meal;



the vomiting also became more frequent, the food which had been eaten three or four days before being often rejected unaltered. In the month of April she was admitted into La Pitié under M. Louis, and presented the following appearance:

April 22. —She is in the last stage of marasmus; cheeks purple, and very hollow; superior limbs of a purple hue; pulse very small; pulsations of the heart well marked; tongue villous and white; no diarrhœa or cough; a depression in the epigastrium; pain upon pressure 1 1-2 inches to the right and a little below the umbilicus; also a little above and below the umbilicus a projection having the form of the little curvature of the stomach. Upon pressure being applied, a species of gurgouillement is heard; has vomited four times since yesterday a clear fluid; continual eructations of gas; respiration healthy. She remained in the hospital about a fortnight; at the expiration of which period she died. Extensive scirrhus of the pylorus was found to be the cause of the symptoms, but I unfortunately was not present at the examination.

Pain in the epigastrium and anorexia are by no means always the signs of an organic disease of the stomach. They occur also in chronic gastritis, a disease which has not yet been well described, and of which M. Louis has seen but few examples; that is to say, in healthy persons, and occurring as a primitive disease; for nothing is more common than chronic gastritis in the course of phthisis and other similar diseases. But in the latter disease there is seldom vomiting of food taken two or three days before, as in this case. The vomiting was, however, by no means pathognomonic of organic disease; it was composed solely of the food, and was never mixed with blood, so that there was no reason to suspect ulceration of the mucous membrane. The depression at the epigastrium, the projection above and below the umbilicus, and the gurgouillement, indicated a distended stomach; the projection being chiefly caused by the lesser *cul de sac*. The situation of the pain seemed to indicate the pylorus as the part diseased, which was the case. M. Louis does not consider scirrhus an inflammatory affection, or to be a sequel of inflammation. Cancer seldom occurs before the age of fifty, whereas gastritis occurs at all ages. Men are less liable to cancer than women, though they more frequently commit excesses. This, however, proves nothing; for, according to the same authority, women are more subject to acute gastritis than men. Cancer has a predilection for certain parts of the stomach. Thus out of 33 cases

In 16 the cancer occupied the pylorus.

11 - - - - - small curvature.

6 - - - - - the large do.

The cicatrices of ulcerations of the stomach are never observed in the epiloros; they more usually occupy the posterior surface of the stomach. The parts of the body most subject to cancer, are less liable to inflammation. Out of 65 cases

21 consisted of cancer of the stomach.

22 " " " " " " uterus.

10 " " " " " " liver.

5 " " " " " " lung.

2 " " " " " " rectum.

No account is here taken of the mamma or testicle. In the lung, which perhaps is the viscus most subject to inflammation, it only occurred in five cases, and in none of these primitively.

**CANCER of the UTERUS—Death.**—A woman, aged 40, the mother of six children, was attacked with hemorrhage from the uterus fourteen months ago, which lasted seven days, and has frequently recurred. She commenced menstruating at 16; her menses were not very abundant, and were always preceded by pains in the loins, which ceased on their appearance. She has had leucorrhœa from the time she first commenced menstruating. Her accouchments have all been natural, and she has generally kept her room five weeks after each. Since the first hemorrhage, the leucorrhœa has been more abundant. She has continued her work, except during the last two days. The hemorrhage was preceded by pain in the loins, extending round the sacrum. She has had a difficulty in making water since her first accouchment, and passes it very slowly and frequently. The pain in the loins and sacrum has augmented during the last week, and the discharge has been red. She has scarcely any rest during this time, on account of the great pain at the anus. Her abdomen is well formed, but pressure in the left lumbar and iliac regions causes pain; pulse S4; chest healthy.

*Pulv. Opii, gr. j. nocte sumend.*

*Inject. Calcis Chlorid. ʒiij ad Oj.*

January 23d.—Has suffered much from pain; less discharge passing her water with facility; no sensation of weight at the uterus; pulse S8; no headache; above the left clavicle are situated several small round spherical tumours which have existed for months; they have caused no pain, and had existed some time before they were discovered: several of the glands in the inguinal region are enlarged.

During the month of February she was examined with the speculum; the neck of the uterus was found indurated and enlarged on the right side, and of a livid tint, presenting a very unequal appearance. She complained greatly of a pain at the arms, which ceased after the application of leeches. Having

obtained admission into Salpêtrière she soon after left the hospital.

The symptoms were quite sufficient to denote the nature of the disease. The hemorrhage occurred at the commencement, was considerable, and was repeated four times. In inflammation of the uterus there is often hemorrhage, but it is very slight. When fibrous tumours exist in the uterus, there is also hemorrhage, but by no means so abundant; and it occurs at a later period. Out of twenty-one cases of cancer of the uterus, all of whom died and were examined, in two only was hemorrhage not present, and in one case there was a rose-coloured discharge. Out of the nineteen, in which hemorrhage formed one of the principal symptoms, in 13 it was developed 3, 4, and 5 months after the commencement of the disease. In the remaining six it was the first symptom that was observed, preceding or occurring at the same time as the pain. Age had no influence upon it, for it occurred at the various ages of 23, 60, and 70. The two in whom this symptom was absent, were between 30 and 40. Hemorrhage accompanies organic diseases of various organs, and in none is it so frequently presented as in cancer of the uterus. The mucous membrane is frequently found quite healthy: the bleeding often precedes the pain. The sensation of weight at the anus, which had lasted a considerable time, and was relieved by leeches, must probably depend upon a swelling of the neighbouring parts. The mean duration of cancer of the uterus is about two years or two years and a half. Cancer of the stomach causes death in a much shorter period, in eight or ten months; the great importance of the functions of the organ fully accounts for this.—*Lond. Med. Gaz. Jan. 1838.*

The next article in the Journal is a letter to the Editor on the subject of the "pernicious effects of *enamel cards*." The writer objects to the suitableness of these cards for the purposes for which they are used. But the object of the letter is to shew their injurious effects on the manufacturers, and is a serious appeal to the public to decline the use of the article on account of the injuries caused in their manufacture.

The next article is one of more interest, and is the report by M. MARTIN SOLON on the inoculation of morphine as proposed by Dr. LAFARGUE; and is from the *Bulletin de l'Académie Royal de Médecine*. The effects of this mode of medication by morphine are considered by Dr. LAFARGUE as worthy of consideration, both in their bearing on practical medicine and on medico-legal questions. The following are the effects observed on the introduction of the point of a lancet charged with a watry



solution of morphine, horizontally, one third in depth beneath the epidermis and allowed to remain three or four seconds.

1. About a minute after the operation, a small pimple, with a diffuse rosy areola, and slight itching.

2. In about twenty minutes, the pimple becomes four lines in diameter and one in thickness; flattened. Its color more than that of the skin, it is hard, its areola very red and about an inch and a half in diameter; its heat has increased, and the sensation of itching remains about the same.

3. During the first hour, the pimple and its areola are at their highest degree of development.

4. After this time, the appearance diminished and at the end of two or three hours, the red colour of the skin has entirely disappeared—the pimple becomes flat; but it does not entirely disappear until 12 to 24 hours after the operation.

5. If several punctures are made near one another, in the same manner, the appearance of the pimples are as above described, but the areolæ are confluent; the heat and itching considerably increased. The appearances however, disappear in the same time as when a single puncture has been made.

6. The general effects which Dr. LAFARGUE experienced from thirteen punctures thus made upon the front of his forearm were, heaviness of the head, frequent yawnings, clamminess of the mouth, and an invincible desire to sleep; the quantity of muriate of morphine not having exceeded a quarter of a grain.

The effects just noticed, Dr. L. considers as showing that the inoculation of morphine may supersede the use of blisters and ammoniacal applications, and that it merits employment more particularly where the object of the physician is to produce the local effects of morphine. Its effects as a rubefacient are also very marked.

The local effects produced by the inoculation of belladonna, of strychnine, of sulphate of quinine, were different from those above mentioned. In employing other opiate preparations, such as Sydenham's Laudanum, and solutions of opium in fat, milk coffee, beer mucus, acetic acid, and gelatine, the proportion of opium being extremely small, the same results were obtained, and no such effects were produced when those substances were introduced without opium.

"M. MARTIN-SOLON repeated the experiments of Dr. Lafargue. From the inoculation of all the common preparations of opium, he observed the same effects as those above mentioned; except that the papulæ sometimes acquired a diameter of an inch and a half, and that they became radiated and diffuse. To ascertain whether any other substances were capable of producing the same phenomena, belladonna, strychnine, the gastric juices, chyme, &c., were employed, and the effects which were observed destroyed the exclusiveness which Dr. L. wishes to attribute to the action of preparations of opium.

The conclusion which may be derived from these experiments, may be of some assistance in determining the absence of opium from a fluid which is suspected to contain it; seeing that in all the cases in which fluids containing opium were inoculated (in one instance, the proportion of opium to the solvent was as 1 to 2000), the phenomena described above were observed by both Dr. Lafargue and M. Solon. The development of the papula can, however, be only regarded as presumptive evidence of the presence of opium; seeing that other substances are capable of producing effects so nearly identical as not to admit of any definite distinction.

Dr. Lafargue has also innoculated a concentrated solution of emetic tartar and the croton oil. The former has always produced a pustule similar to that of acne simplex, containing pus, twenty-four hours after the operation; and the effect of croton oil has constantly been the production of a furuncle thirty-six hours after the introduction of the medicine. Neither of these substances has, however, been sufficiently employed to allow of any inference to the advantage which this mode of application possesses over that in general use. Its simplicity, nevertheless, renders such an experiment very easy."—*Bulletin de l'Académie Royale de Médecine.*

We next come to some observations by Dr. ROBERT DICK of Glasgow, on the employment of gunpowder as a medicine in various states of the gastro-enteric mucous membrane—from *Edinburg Med. & Surg. Journal*. Dr. DICK was induced, from theoretical considerations to prescribe this article, and had reason to be satisfied with its effects. The derangements for which it appeared to him to be peculiarly adapted were morbid secretions of the gastro-mucous membrane, depending on *sub-inflammatory* action, or accompanied by it. In such cases, gunpowder, given in various doses, and with the occasional interposition of ordinary mild laxatives has proved, in his hands, eminently servicable. Dr. DICK would not be surprised if, given in large doses, and for

a greater length of time than he has prescribed it, it should be found useful as a constitutional alterative, or as a cutaneous drug. He administered from ten grains, indefinitely upwards, several times a day. He found spirituous liquors, pungent condiments, &c. contra-indicated during the use of gunpowder. The gastralgic effects which Dr. D. found these produce, when used simultaneously with gunpowder, he ascribed to what he designates the *detergent* effects of that substance on the mucous membrane, which, owing perhaps to its charcoal and mixture, it denudes of its attaching albumino-mucous secretion, clearing, and seemingly attenuating that membrane in some measure. It is found in common, ready for use. The best form of administering it is in the dry state, as Dr. D. thinks the liquid form does not suit. No apprehension need be entertained of the charcoal producing any unpleasant consequences. In *pica*, and in the chlorotic state, large quantities of this substance are eaten with impunity; and further, J. P. FRANK\* recommends it as an effectual remedy in flatulence.

The above notices are very general, as the remarks of an individual, who suggests a new remedy ought always to be.

We have long known the extensive use of the article in the country for the promotion of labour pains, and as we have always understood, with very fine effect. We have never prescribed it, in consequence of always having efficient articles for this purpose, the operation of which was well known.

Dr. DICK follows the above with some observations on the use of charcoal, which seem to banish fears of its use, as well as set forth its beneficial effects, with references to certain late authors by whom its use is justified and advocated. We give these observations, with the extract from Dr. CRAIGIE, below, after stating that charcoal has been long and abundantly used in this country as a valuable medicine—perhaps longer than any period referred to by Dr. CRAIGIE in speaking of its history. It had been in considerable use as a domestic remedy, and by some physicians, in New Orleans, and other southern locations in liver irregularities and bilious fevers, previous to publications on the subject by Dr. DANIEL of Savannah, in which his extensive experience in its use was set forth, and its medicinal vir-

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\* De Curandis Hominum Morbis.



tues strongly advocated. Now, it is a very common article in this country in domestic practice, as well as in that of many of our best physicians, some of whom we know use twenty or thirty pounds a year in their practice. The preparation which comes now for use, is a beautiful powder under the name of *Calcined Charcoal*.

"In speaking of the therapeutic effects of gunpowder in various morbid states of the gastro-enteric mucous membrane and its secretions, it may be not unseasonable to add to the observations now made by Dr. Dick, the remark, that charcoal in its separate and pure state has been long used by many practitioners with similar intentions, and to fulfil similar indications in the treatment of ague with gastric, enteric, or dysenteric complications. As a short notice of the use of this substance is given in the *Elements of the Practice of Physic* by Dr. Craigie, without entering into all the details of the history of the introduction of this substance into the practice of medicine, the easiest way perhaps is to quote the account given in that work.

"The exhibition of charcoal for the cure of ague, as a substitute for bark, appears to have been practised in 1813 by Calcagno at Palermo, and afterwards by Dr. Calvert, Mr. Mackesy, Mr. Tully, and other English practitioners, in Sicily;\* and it was used with that intention by Dr. Jackson in the West Indies. In simple ague it seems to produce little or no benefit. But in ague with affection of the gastric, or the hepatic, or gastro-enteric circulation, in ague with anguish at stomach, squeamishness, flatulence, or hiccup, and in dysenteric ague, its sanative influence is unequivocal and powerful. It may be given in doses of from ten to twenty grains, in rice-water or arrow-root, either alone or with six or eight grains of rhubarb, and two or three grains of powder of ipecacuan. It appears to operate chiefly by rectifying disordered secretions of the stomach and bowels. It is probably by its charcoal, that the snuff of a candle, which has been alledged to be beneficial in curing ague, as mentioned by Lind, operates."—*Edin. Med. & Surg. Jour.*

We are next presented with a very interesting case of apoplectic disposition which appeared hereditary and which had been often palliated by the usual means, as copious depletion, &c. This case is also from the *Edinburg Med. & Surg. Jour.*, and is given by Mr. LAW. The case is too interesting to be omitted.

"M. F., aged 37, has for seven or eight years been occasionally subject to violent headache, continuing for some days, and

\* *Med. and Surg. Journ.* x. 15, 493

though not always, very generally proceeding to a hysterical paroxysm, which, along with the headache, is only dispelled by free bleedings of from sixteen to twenty ounces of blood, and sometimes a larger quantity.

She is rather above the middle stature, and of a full habit, without much complexion, the bowels apt to be slow, but the necessary aperients regularly employed. She is rather apt to be sedentary, but partakes most sparingly of sleep, or even the recumbent posture, and takes food as well as liquids in much less quantity than the average of her own sex, avoiding vinous stimuli almost entirely. Catamenia regular.

Every practitioner summoned to her assistance, wherever she may have been residing, has, from the urgency of the symptoms, been led to the use of the lancet, which alone ever relieved her effectually at the time, the blood flowing with unusual force from the arm when I have had occasion to open a vein in this person. In a few hours after one of these full bleedings, she will leave the recumbent position, proceeding with her usual occupations as if nothing had been the matter. These attacks became of more frequent occurrence towards the end of last spring, when it seemed to me, that as it was next to impossible to diminish the ingesta here, and as the degree of exercise necessary to subdue so strong a disposition to plethora would be of very difficult enforcement, independent of other collateral circumstances in this case, arsenic administered in small doses at the commencement of an attack, would, from its sedative (?) influence on the system, lessen what we are contending against, and for a longer time than the bleedings, which are so apt to demand repetition. Accordingly she had a watery mixture prepared with five minims of the arsenical solution in each teaspoonful, directing her to take a teaspoonful in a little more water, morning and evening, just after a meal, when threatened with an attack, and to intermit it entirely when the tendency disappeared.

It is now six months since the trial was first made, the medicine being, according to these directions, only occasionally employed; nor has she ever since suffered, but in a very slight degree, from what had begun to assume a more alarming aspect. She has, on several different occasions, in this time, found it necessary to have recourse to the arsenic for three successive days, but with the same marked benefit, and what may appear less accountable, the disposition to such a disease has been thus controlled under even some increase of appetite, using rather more food than formerly.

I have been informed that one of her parents died of what has been described to me as apoplexy; but if it was so, and there is a hereditary tendency to cerebral disease, the influence of the medicine in this case is not less worthy of attention.

I never for one instant intend to be understood as wishing to

see such treatment substituted for that of the lancet in most ordinary occasions where its use is signal and direct, but there are many others where the above may be successfully employed, either by itself, or in conjunction with, or consequent to some mode of depletion."—*Ibid.*

### *Extirpation of the Parotid Glands.*

The next and last case which we shall notice, is one in which the *Carotid Gland* was extirpated on account of disease, in the Toronto Hospital, Upper Canada, by C. WIDMER, Esq. surgeon to the forces.

"An elliptical incision having been made in the integuments of the most prominent point of the tumour, its removal was effected without much difficulty, and with little loss of blood, the facility being attributed by the author to the adoption of the method of separating the mass from the lower part upwards. The external jugular vein and external carotid artery being necessarily divided, were immediately secured by ligatures, the latter being tied at both ends. When the removal of the mass had been entirely accomplished, the styloid process, and the transverse process of the atlas, were exposed to view. The result of the operation was quite favourable, the wound being entirely healed in six weeks."—*Lond. Med. Gaz. Jan. 1838.*

The present No. concludes with a notice of Dr. KRAMER'S Air Condenser as a remedy in cases of deafness, with a cut, and full description of the condenser—Bibliographical notices of Dr. COATE'S Family Adviser—Dr. STEVEN'S Lectures on Lithotomy—Dr. CALDWELL'S Protest, &c. &c.

### *Rape.—Pregnancy.*

In speaking of external and internal explorations by the touch for determining the fact of the commission of rape, M. HOHL, Professor Extraordinary of the University of Halle, observes, that "unless this examination be made soon after the commission of the crime, it will be to little or no result; and the difficulty will be much increased, if sexual intercourse had previously taken place." This opinion is corroborated by FORBES and CONOLLY of the British and Foreign Review, who state, that "for ascertaining the existence of virginity and proving the commission of



rape, we can prove little by mere manual exploration." "The presence or absence," say they, "of the hymen has long been ascertained to be no evidence whatever, for or against the existence of virginity." A case occurred to them a few years ago, of primipara, where the greater part of the hymen was still existing. "The different conditions of the labiæ, nymphæ and the vaginal rugæ," say they, very justly, "are much too uncertain to ground any decisive opinion upon; as a slight degree of dyspepsia, or other abdominal derangements, or of leucorrhœa, will produce nearly all the changes which professor HORN considers necessary to observe. The feeling whether the clitoris be still covered by its preputium, needs no observation, as few decided changes take place in the female external organs from only one occurrence of sexual intercourse; and little alteration is produced, until the passages have undergone the extreme dilatation which they suffer during labour."

This view of FORBES and CONOLLY demands some qualification, before it can be adopted for the diagnosis in question: viz. the determining virginity.

In *Descensus uteri*, where the uterus descends to the upper boundary of the vestibule, or the location of the hymen, it is indeed often the case that the whole vestibule is as well contracted as in virginity, and notwithstanding the continuance of this state of things for a considerable length of time, the hymen itself is often so little interrupted as to afford no trifling obstacle to the use of the touch for the correction of this species of *Ædopstosis*; and sometimes this difficulty is so considerable as to render replacement impossible, without a degree of violence so great as to lacerate the hymen. A case of this kind we once witnessed, attended with a violent fit of hysteria, which was characterised by incessant and violent fits of laughter of many hours duration. This occurred in an unmarried female about 19 years of age, and having refused to yield in the least degree to the use of the ordinary remedies in such cases, examination per taxis was instituted; whereon it was found that the distended uterus was in contact with the hymen, the opening through which was not large enough to receive the end of the little finger. Believing that the paroxysm depended on irritation of the uterus from its monthly plethora, to which was added no inconsiderable obstruction from uterine descent, advantage was taken of a position to favour the

action of gravitation, which, with the pressure of the finger against the hymen and uterus, and the introduction of air, soon enabled the uterus to fall back from its position in contact with the hymen, to the partial relief of the patient. On a repetition of this process, the laughing effort entirely ceased and the menstrual flux appeared. A lunar month elapsed, and another paroxysm, lighter in degree, supervened. This was relieved in like manner. After the conclusion of this menstrual period, a styptic lotion was carefully introduced by means of a womb syringe, above the hymen, which still remained entire, but with some slight dilatation of its foramen. The daily repetition of this for ten or eleven days was followed by no other bad symptoms during our acquaintance with this patient, which was for several years.\*

But most commonly, when this disease has lasted for a considerable length of time, the hymen has not only disappeared, but the whole vestibule has become so much dilated by the presence of the os and cervix uteri, as to appear not dissimilar to those who have borne children, and capable of suffering the convenient application of the pessary. Thus then, in determining *virginity*, and much more, *rape*, the dilatation is not available. These facts are of deep interest in forensic medicine.

*Pregnancy.*—This state sometimes becomes a subject of forensic investigation. We have known several instances wherein pregnancy was claimed for the respite of execution, or mutation of penalty, by females under sentence of death. But pregnancy is a subject of deeper and more frequent interest, simply in a medical point of view. It is therefore one, which of all others, as FORBES and CONOLLY say, should be handled in a clear, concise and practical manner. Professor HOHL divides this inquiry into nine questions of great importance:—

1. Is she pregnant?
2. In what month?
3. Is she pregnant for the first time?
4. Is there more than one child?
5. Is a state of disease combined with pregnancy?
6. Is it extra-uterine?
7. Is the fœtus alive?

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\* It may be well to remark that the subject of this case was a coloured woman, and the case was protracted, severe, unyielding, and apparently dangerous.

8. What is its position ?

9. Will the labor be anormal from mechanical obstruction ?

“ In determining the first question, we will not detain our readers with the long and tedious enumeration of the various points to which the practitioner must direct his attention, and upon which the changes are rung with a degree of persevering repetition that is almost exhausting. It is little short of nonsense to suppose that the state of the os externum and the carunculæ myrtiformes, the calibre of the vagina, the swelling of its parietes, its temperature, secretion, the length and condition of its rugæ, are points on which we can fix the slightest data for forming our opinion as to the presence of pregnancy. We cannot agree with him that the temperature or secretion of these parts are so much increased during pregnancy: with respect to the former, we might say the contrary; for we have repeatedly found the vagina of a pregnant woman impart a feeling of coolness to the finger, and it must be a well-known fact to every body who is frequently in the habit of examining per vaginam, that the labia are frequently even cold: this is in some measure produced by the moisture of the vaginal secretion, but we cannot think that this is so increased in quantity during the earlier months of pregnancy as in any degree to justify its guiding our prognosis. This certainly applies to the relaxed females of a great metropolis, or those living in the swampy parts of Holland, &c., where it is a known fact that there is much greater disposition to copious vaginal secretion than elsewhere, but we apprehend that the insufficiency of this as a point of diagnosis applies equally to the more robust natives of other districts. We have examined many hundreds of the author's countrywomen during the last months of pregnancy, as well as at other periods, and are not inclined to make an exception in their favour.

In examining a woman to ascertain the existence of pregnancy, it is desirable to place her in such a posture, that we may examine both externally and internally at the same moment, and also ensure as far as possible, the complete relaxation of the abdominal integuments. Some excellent directions have been left us for this purpose by Rœderer, which have been also quoted by the late W. J. Schmitt, of Vienna, in his short but valuable collection of doubtful pregnancy cases. “ After the third month, the uterus projects above the pelvis, gradually increases and distends the abdomen; but a careful examination is necessary, in order to distinguish the enlarged uterus from other prominences, because an enlargement of the abdomen from disease may easily be confounded with pregnancy: merely looking at the abdomen will not assist us much in our diagnosis; we must examine by the touch. In order to prevent any chance of uncertainty, the following points should be attended to: we should place the



patient upon her back (before she has taken her meals, and having previously emptied the bladder and rectum,) with the head and feet raised above the loins, the heels drawn up to the nates, so as to relax the abdominal parietes; the practitioner should place his hand across the abdomen, so that the little finger is turned towards the pubes, and thumb to the navel. Let the patient breathe deeply, and the practitioner press gently with his hand during expiration; if he feels at this moment a hard globular resisting mass above the pubes, he may be certain that this is the enlarged uterus."

In ascertaining how far pregnancy has advanced, our attention must be chiefly directed to the circular form of the os uteri, its being closed, the smoothness and softness of its edges, (now no longer lips,) the alteration in the shape, size, and substance of the *portio vaginalis*; viz. that part of the cervix which projects into the vagina; a distinction which is very useful, and which we have for some years adopted from the German accoucheurs; the increased size, weight, and diminished mobility of the lower portion of the uterus; and lastly, if it be in the latter months, the contents of the uterine cavity and diagnosis of the presenting part: this must also be combined with the external examination of the abdomen, in order to estimate the height of the fundus above the symphysis pubis, the size and form of the uterus generally, and whether the movements are yet perceptible: these are the chief practical points of investigation to which the practitioner must turn his attention in such cases: but, as to the old, oft-repeated dogma of its being necessary to examine the puffiness or turgescence of the vaginal parietes, the diminution in the size and number of its rugæ, the prolapsus-like duplicatures of the anterior wall, its temperature, mucous secretion, &c. &c.,—all this is useless, at least, in practice.

In deciding whether it be her first pregnancy, our chief attention must be directed to the form and condition of the os uteri. An os uteri which has once undergone the dilatation which takes place during labour, seldom entirely recovers its former shape: it becomes unequal, so that, instead of forming a circular depression, with edges quite smooth, like a dimple, as it were, at the end of the cervix, it forms an irregular-shaped margin, with uneven edges, which are generally hard in places, from the little cicatrices of former labours. These are important points of diagnosis, and have more than once enabled us to assert confidently that the patient had already borne a child, in spite of previous assurances to the contrary. The absence, however, of these effects of parturition,—we mean the perfectly round and smooth depression of the os uteri, as felt in the primipara,—is not always a proof of first pregnancy: we have occasionally, though rarely, met with a similar condition in a patient who had already borne a child. Besides the examination of the os uteri, that of the

perineum, and especially its frœnulum, should not be neglected; for this latter rarely escapes being somewhat torn in the first labour. As regards the external examination in determining whether it be her first pregnancy or not, the flaccid abdomen and rugæ in the skin are certainly effects of previous labour which are worth noticing; but it must be recollected, that their presence or absence are not distinct proofs for or against."—*British & Foreign Review*.

We would however warn the practitioner against the danger of a hasty decision on the fact of pregnancy. In medical jurisprudence, even a *doubt* entertained relative to this fact, should be considered sufficient to justify a respite of capital punishment, until time elapse to dispel it. But the importance of a decision in a medical point of view, is not a matter of such trivial concern, nor so easily passed over. We are well aware of the fact, that most practitioners think it a very easy matter to decide on the existence of pregnancy at almost any time, and especially after the first month; and it is true that a decision made on the light grounds usually depended on, is very often correct. This, however, only proves the want of thorough attention to the nature and effects of other causes than pregnancy in the production of nearly all of what are commonly considered evidences of this state. These are morning sickness, coloured areolæ, swelling of the mammæ and lactation, expression, absence of menstruation, buffy blood, abdominal and even uterine tumefaction, borborigmi, hysteric symptoms, fickleness of appetite, melancholy, unusual irritability of temper, salivation, acid stomach, depraved appetite, &c. &c., all of which may be, and often are, produced by other causes than pregnancy. The faithful, conscientious and scientific practitioner will find therefore, when he comes to adopt a practice founded on a decision of the question of *pregnancy* or *no pregnancy*, a practice which for the former of these states would amount to little less than a culpable neglect of the necessities of the latter; and for the latter, would be highly dangerous to the former—the practitioner, we say, when brought up to the decision of this point, must find that he has, in view of *absolute* decision, especially in the first four months, one of the most difficult problems in all the practice of his profession. He *must not* decide in favour of pregnancy by a numerical estimate of the symptoms or otherwise, when it does not exist, because the instant he does this, he is lost to all

other views both of causation and pathological condition. These are therefore allowed to go on in their ruinous, and for a time, hidden operations, until the golden moment passes, beyond which there is no hope. He *must not* decide against the existence of pregnancy when it does exist, because by such a decision he will, if he attempt any thing like thorough investigation, determine on other views of the pathology, the therapeutic means for which will be calculated, as far as medicinal means may have power of *abortives*, to terminate in this dangerous and criminal disaster. There is no case which requires more of the diligent study and attention of the practitioner than the early months of pregnancy. Women labouring under this doubt, may not be depended on. They are often deceived by their own supersensitiveness or by their desires or aversions; or they may have strong motives uncontrolled by moral principle, which induce them to desire to deceive. We have witnessed the greatest errors in experienced mothers in this regard. We recollect the case of a woman, the mother of many children, to whom we were called for the purpose of her accouchment upwards of 30 years ago. Her abdominal tumour was equal to the 7th or 8th month, and she believed her parturient pains had commenced. She is still alive, but has never given birth to a child, or any other uterine production calculated to make the symptoms. The abdominal tumour subsided spontaneously in the course of a year or two, and her health, though not very good, has been such as to sustain her very well to the present time, and to the age of about 70 years. We could name many other cases similar in their nature, but less conspicuous.

By the well-founded doubts which hang about the first four or five months of pregnancy, the practitioner is reluctantly driven, with much mortification of feeling and self-disapprobation, to withhold his positive decision in many cases until the period of quickening. This, in the present state of the science, is to be relied on as the earliest *unequivocal* evidence of pregnancy. Nor can this evidence be received on the word of the patient alone. The practitioner must feel or see it for himself; and even here he *may* be deceived. We recollect another case to which we were called some twelve years ago for accouchment. The patient was a monomaniac on this subject. Her husband had been absent, and supposed to be dead for several years; still she main



tained most pertinaciously that she was pregnant and that her time of travel had arrived. Her abdominal tumefaction was fully equal to a nine months development. She was of corpulent habit—and appearance of very fine general health. From her manner we were induced to believe she suffered under labour pains; but to the internal touch she exhibited nothing like either labour or pregnancy, whilst to the external, she exhibited a large tumor, much resembling that of pregnancy, and at one place, just below the scrobiculus cordis, to which she called our attention, there was uniformly, the appearance of a knee or elbow which seemed to recede from the touch as soon as the touch was sufficient to preceive it distinctly. We made no prescription. Four or five years after we were again called to this woman, whom we found much larger than before. She claimed then, as confidently, the entertainment of no less than seven children within her abdominal parietes, which she said had increased at the rate of one for every nine months since we first saw her. On being assured that such could not be the case, she was pleased to demonstrate the fact, as she considered it, by exhibiting the whole abdomtnal tumour for inspection, in the hope of procuring aid from gastrotomy. On this exhibition, seven distinct compartments, or distinct projections very much resembling those made by the fundus of the pregnant uterus in obliquities. These were carefully arranged so as to fill all the anterior and lateral regions of the abdomen. She desired that we should see and feel the movements exhibited by each of the children. On inspecting for this purpose, three tumours, each of which she ascribed to the presence of a fœtus, exhibited, by turns, both to the eye and touch, the appearance of a swelling and rolling motion, whilst she sat still upon the chair. Whilst thus situated, a theme of conversation was offered which was thought most likely to captivate her attention, and lead her mind off from the immediate consideration of her affliction. During this, and whilst her mind seemed fully engaged in this subject, foreign from the examination, and whilst she still sat deeply engaged in a well-connected narrative, relative to loss of fortune, &c., the same movements were exhibited in as plain a manner as when her attention was directed to them; and this without any other interruption of her train of thought and conversation, than the frowns which indicated the pain those movements inflicted. By

her leave we took a friend, an intelligent clergyman,\* on the next day to witness the phenomena, all of which were exhibited as palpably as before, whilst this gentleman monopolized her attention by an interesting religious conversation. She remained in our neighborhood for several years, corpulent, and exhibiting all the appearance of very fine general health, and was afterwards often seen in the streets, apparently actively engaged in business. We determined on an autopsy at all hazards after her death, but latterly she has disappeared, and we know not whither she has gone.

Another case of pretty similar import, so far as regards the evidence of the patient herself, we feel disposed to state briefly, because we think the subject of this diagnosis is one that cannot be too abundantly illustrated. The room of a widow lady about 40 years of age, was entered one night whilst she was in bed and asleep, by some ruffian, who, it was believed, was in search of her beautiful daughter, who, as it appeared, was spending that night from home, with a young female friend; and it so happened that her mother occupied her bed. The lady awoke by the feeling of a hand on her face and made an attempt to call for help from across the street; but her throat was immediately seized by the hand of the villain with a distinct threat of death on her making the least noise. He accomplished his purpose and made his escape, with no more discovery of the offender than by the feeling of his head, that he was a negro.

The woman called us the next morning to relate the circumstance and to ask our opinion as to the possibility of impregnation under such circumstances. We gave a negative opinion, but this did not seem to satisfy her mind on the subject. After several months we were notified by her of the fact of pregnancy according to every symptom which she could relate, *not excepting quickening*. We examined fully and freely by the internal and external touch, and could find nothing but her own fears to lead to the suspicion of pregnancy. Subsequently she engaged me to attend her accouchment. During all the nine months following her misfortune, she emaciated and wore a bad aspect. At the end of nine months, I was called for her accouchment, with assurance of quickening, &c., and could not satisfy her on

the subject, although her emaciation and abdominal relaxation were such, that by pressure on the hypogastric region with a force under that which would give pain, the anterior parietes could be easily brought into contact with the umbilical spine.

After the nine months had elapsed, this woman daily increased in health and yet lived, a robust and active woman of high sanguine temperament.

After all then, it must appear that we have no evidence for the absolute diagnosis of pregnancy previous to the time of quickening, and this, not merely declared by the woman, but actually seen or felt by the accoucheur is the best evidence which can be afforded. This, when distinguished from other movements, is of course, absolute and unequivocal; but care is sometimes necessary when it is least thought of in such cases.

We pass over the brief and unsatisfactory notice by these gentlemen of the diagnosis of pregnancy, in connexion with a state of disease, of extra-uterine pregnancy, of the dead or living state of the fœtus, and the question of the position of the child; and come to "the investigation of various points of interest during labour, which M. HOHL divides into the following questions, viz: 1st. Whether labour has commenced and will go on? 2nd. How far it has advanced? 3d. What are the obstructions to labour? 4. Is there a second child in the uterus? 5. Is the child alive or dead?

On the 2nd of these questions, that is to say—how far has labour advanced, M. HOHL makes the following observations:—

"Attention to this question," says he "is of especial importance, where abortion threatens to take place; because our practice will be considerably influenced by it; our hopes, or despair of averting the expulsion will depend upon it. When the appearance of hæmorrhage, with periodical hardness of the uterus, relaxed mammae, and fallen abdomen, afford reason to dread expulsion of the embryo, the internal examination must be instituted with the greatest caution and gentleness: it will be chiefly directed to the vaginal entrance, the vagina, and uterus; especially the os uteri. With respect to the former, this, as abortion proceeds, will be felt somewhat wider, from participating in the cushiony and soft condition of the vagina, in which we shall find an increase of mucous secretion, (in all probability, more or less mixed with blood,) the temperature increased, and coagula lodging in it. Not unfrequently the anterior wall of the vagina will be felt peculiarly swollen; and, if there be any difficulty



in passing water, we shall feel a long bolster-like mass, which is the swollen urethra. The uterus sinks somewhat lower in the vagina; we feel the external os uteri (os tinæ); and sometimes the os uteri internum also open. Where the opening is large enough to admit of the tip of the finger, it feels as if surrounded by an elastic ring of cartilage; where this is the case, the os uteri seldom closes again: in other cases it is more dilated, and we can feel the ovum presenting. When the abortion is in the second or third month, the practitioner must bear in mind that it may have been retention of the menses, and that therefore what he feels in the os uteri may either be an ovum or a coagulum of blood. To decide this point, he must keep his finger in contact with the substance lying in the os uteri, and wait for the accession of a pain, (for where clots come away, pains like those of labour are present,) and ascertain whether the presenting mass becomes tense, advances lower, and increases somewhat in size: this will be the case where it is the ovum pressing through the os uteri. On the other hand, if it be a coagulum of blood, which it is well known assumes a fibrous structure, it will neither become tense nor descend lower, but be rather compressed. Generally speaking, the ovum feels like a soft bladder, and at its lower end is rather round than pointed; whereas a plug of coagulum feels harder, more solid, and less compressible, and is more or less pointed at its lower end, becoming broader higher up, so that we generally find that the coagulum has taken a complete cast of the uterine cavity. If we try to move the uterus by pressing against this part, it will instantly yield to the pressure of the finger if it be the ovum; whereas the extremity of a coagulum, under these circumstances, is so firmly fixed, that, when pressed against by the finger, the uterus will move also. When abortion happens at a later period of pregnancy we shall be able to feel the different parts of the child as the os uteri gradually dilates, viz. the feet, or perhaps the sharp edges of bones, although we cannot distinguish the form of the head, from the cranial bones being so compressed and strongly overlapping each other."

*Theorie des etres organises renferment les generalites de la vie organique; par ANDRE SNIADOCKI, traduiten francais du Polonais, par BALLARD & DESSAIX, p. p. 283.*

*Theory of Organic beings, including the generalities of Organic life. By ANDRE SNIADOCKI, translated into French from the Polish, by BALLARD & DESSAIX, p. p. 283.*

This work of Dr. SNIADOCKI so advantageously known in France since the translation of M. M. BALLARD & DESSAIX, we believe, has never been reviewed or noticed this side the Atlantic.

For ages, France, England, Spain, Italy and Germany, stood erected into literary principalities, and their selfishness contented them, for the most part, with believing there was little new to be learned beyond the limits of their respective empires. Mind has been franchised, the ideas of nations have lost their local habitations; they are rapidly becoming the common property of the enlightened species; gathering together in a common centre from the wide circumference of thinking men, new comparisons are made, new thoughts evolved, fresh light breaks forth; the sciences rush forth; and truth triumphant assumes a colossal and glorious form. In other ages the love of rule and power, the clangor and glory of war, governed; in ours, it is the glory of truth. For her praises the triumph of fame is engaged in the two hemispheres; the triumph of fame, which once delighted to ring its loudest peals on the path of warriors and conquerors, the oppressors of the species. It was this spirit which brought the work of our author from Poland to France, where it now reflects redeeming honor and lustre on the literature of the author's native country, which like our own America, has long stood in degradation in the eyes of all literary Europe. •

It is our intention to make such original observations and descantations on the subject of our author, and translate such parts of his work as will enable our readers to understand its general scope and tenor, and the substance of his ideas.

Zoogeny, the subject he treats, is of prodigious magnitude, and lays under contribution almost the whole empire of existing knowledge. On the one side it lays hold of the arm of chemistry, invokes the aid of arctology, physics, zoology, medicine, statics, mineralogy; on the other, it stretches along the domains of theology. At first, the existence of the animated universe was predicated upon the forms and properties of matter, and depends upon them still for sustentation. This matter, by virtue of which there is life, is not a misshapen, fragmental mass, resting in space, or flying at random, but enjoys forms of most

perfect beauty, and orders of constitution and adoption, evincing they were not made for themselves ; that their being is not solitary, but that they are only individual parts, materials for a greater design, a more comprehensive organization. We do not see them piled up in the chambers of the sky, but disposed of at vast and different distances from one another, accordingly as we may judge, to their make and powers of action. The places they occupy are the best fitted for the displays of their movements and influences, each part acting on the whole, and the whole, upon all its parts ; each laboring for itself and for the whole, the integrity and continuation of its being depending upon this double action. Thus in the great uranic whole, the solar system is but one unit.

In animal life we can distinguish a great number of individual parts or actors, digestive organs to appropriate aliment ; a heart to distribute it ; lungs to rob the air of its animating fire for it ; a brain to elaborate and irradiate the power and excite movements in every part ; thus by its own elaborations forming an atmosphere about every living atom, and subjecting the entire economy to its own empire. In the great system of material life, for so we may call it, we cannot distinguish the same number of parts or actors : we know of none but suns, planets and comets, as constituting the bone and sinew of uranic animation.

There are, however, statical considerations to induce the belief of the existence of other orders of forms, which play in and enjoy this life, which we have never seen. For, if so many multifarious forms as we know, enter as constituents in our life, since the same mind designed both from analogy, why may not the great material life, from which ours is derived, and upon which it is engrafted, be made up too of an equal or greater number of elementary constituents ? We know but very little of the uses of the few different parts with which we are acquainted, in the stupendous economy of this uranic vitality. Something like the heart in our telluric life, the sun is placed in the focus, where the radii meet of all the planetary orbits, which is nearly in the centre of the system they form, which places the focus of all the system's action some distance from the centre of his own body, causing elliptical motion in him and them. Thus as in our life, every part or organism of the uranic economy, labors continually—labors for itself and for the conservation of the whole. Stop his motion in either of his foci : on that side his planets would press toward him, their orbicular movements becoming more furious : on the other side, langor and sluggishness would ensue. On the one side, the fury and excess of action would be in proportion to the defect and torpidity of the other. There would be partial stagnation or congestion of one part of the system, and raging fury in the other. This state continuing, the planets could never regain their orbits, the proper places of their conservative action in their economy.



Again :—As in our living economy, all the motions of uranic life are circular ; so that Empedocles was right, when he said, *'nature delights in circular motion.'* Thus, there is an action or function proper to each world above us, which tends the equilibrium and good of the whole, whose use or function is necessary and essential to the conservation of the economy, to which it belongs. No part or member is useless or idle ; all in their make possess adaptations to participate and respond in the whole's great effort, common fountain of their individual good and being. So in our life ; if the absorbents relax their efforts, there is dropsy ; the heart, there is capillary stasis ; the lungs, there is a crushing of excitement ; the brain, radiatory organ, there is *defaillance* of all the economy. All are essential to each individual part or member, and each to all. It must be so in all circular movement, where the motion passes through, and is carried on by different actors. And this is the great type of movement impressed upon the whole universe. All beings then obey its impulses, all are formed upon the same great model, all enjoy the same life, performing their parts alike in their respective economies, bearing this conspicuous and specific mark of a solitary origin and creator.

In the opinion of Tasso\* and others, this same type of movement holds in the elder orders of creation.

"Now round his throne, which stood in awful height,  
Roll the fair Cherubim, bright wheels of living light."

Thus life irradiates throughout all being ; its streams flow through every sun and planet, and meander through all the limits of space. Thus the earth, which nourishes us, is naught but our fellow creature and our kind sister ; the butterfly which disports in the breeze but our pretty neighbor, and the sun—which warms us, our elder brother ; all born of the same lineage, all our cotemporaries, enjoying and playing in the same fountain of uncreated life.

To proceed :—In our vital telluric economy, among the higher orders, life everywhere has its tripple focus. The number of these foci mark the perfection of life and organization. Under them is placed in dependence respectively the ballance of the organisms composing the animal. In man, these foci, or the lungs, heart and brain, are the most happily and advantageously ballanced, which places him, with considerable interval at the head of the scale. Descending this scale, we behold sensibility and the phenomena of intelligence disappear as these foci diminish in number. In the molusca, they have all disappeared, except some slight rudiments of a medullary or cerebral one. This focus, the most preeminent, which Derronier has proclaimed

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Jerusalemite. The expression is *'living, thinking light,'* not expressible in the same line of our English verbalization.

for the whole vegetable world,\* seems to be essential to and inseparable from all life, and accordingly is coextensive with its empire.

The actors or organs composing the individual economy of animals, are all placed in contact, and action plays only through continuity of tissue. In the uranic economy, the actors or organs, so to speak, are placed at vast and exquisitely geometrical distances from one another, and action plays not through continuity of structure, but through empty space to connect all the parts into one operative whole. About each organic part or planet, all motion tends to the centre; so that each enjoys a focus of its own to regulate its individual economy. All these foci are ballanced upon the double central one of the sun, which unites all the parts into a great community—the community of worlds, exciting, coordinating the movements of the whole. We see bone, tendon, muscle, &c. in our life: here we behold our array of regular parts of different orders, qualities and properties—suns, planets, subplanets and planetoides; and space, the cellular tissue which unites them. Here they display their unborn strength, pressing onward without ages. Here, then, is action, subordinate consentaneous action! And if the amount and intensity of life is measured by the amount of movements, how full, how abundant and perfect must be the uranic!! This is the life of Nature proclaimed by PYTHAGORUS and DIODORUS, not the life of KEPLER, who held the stars to be “beautiful, refulgent, living animals;” but the life, the great and beautiful life of Nature!! the parent life of all that lives and walks and breathes among us! These forms so symmetrical, so polished and beautiful are not as some thinkers are wont to believe, self-formed or at least self-finished. Rolling or rather wallowing in space a semiliquid mass at first, their poles become flattened, and their equatorial portions elongated by the joint action of the centripetal and centrifugal forces—Idea unworthy of their bearing and philosophy! Like the beautiful forms of animals, they soar beyond the empire of their own system, claim a Creator, and, in their being’s make, call our souls and bodies, brother.

No being in nature enjoys a solitary existence: the essence of what it is, is not in itself; its make necessitates for it the enjoyment of a double life, the one individual, the other, the life of community or of the whole. Thus life impels life, being, being, all clothed with the fulness of uncreated vitality.

Guided by these developments in the study of nature, Truth will come leaping forward to meet us; no other rout will lead us to her sacred repose.

Let us study life in the individual, in its community; then, the older life in material individuality; in the great and higher community of the stars. But alas! “*ars longa, vita brevis.*”

An energy darts from the brain, and voluntary movements

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\* RECHERCHES experimentales, &c.

are excited. This energy is the nervous or sensorial power, in its nature material, and transmitted by material media, the nerves, to the muscles, where the movements begin. This is mind moving matter. The light from the mountain falls on the retina, the shock penetrates the brain, and the eye sees its blue, craggy top. The light, like the sensorial power, has no transmitting media, but its shock undulates throughout the brain, and there is vision. This is matter moving mind. Emotions of beauty, grandeur and sublimity, awake at the sight. This is matter let through the eye undulating through the soul, proclaiming the law of the individual and universal life of nature.

Again :—From all the sun's substance emanates a prodigious energy ; the same sort of energy in upwards of forty mighty globes respond, and all, whirling on their axes, wheel around the common centre. The interplanetary spaces are vast, and must be materially vacuous to admit of the motions they do. We see going from the sun no nerves or transmitting media to convey this energy, and yet the everlasting fountain of motion flows on in plenary exhaustlessness. How *subtle*, how *immaterial*, nay *spiritual* and *omnipresent* is this corporeal energy which darts the planetary bands round their burning focus. And if the old statical problem be true, "*that nothing can act where it is not*," are we to conclude the interplanetary spaces are an astronomical delusion, and the sun and his train are in actual contact ? or with our astonishment confess our utter ignorance ? If, therefore, we are entirely ignorant of the *manner* and *instrumentation* by which matter moves matter, we can behold a few links in the chain of causes by which matter impels movements in mind, and mind, in matter, and motions are propagated in organic living bodies through the continuity of tissues.

Amid all our ignorance, however, of one thing we may be certain, of which all our meditations confirm us :—all our organization and life here below are sustained by the intercourse they enjoy with the mineral globes that roll over our heads,—with the great uranic body and life. We are able to behold many of these uranic relations and instrumentations ; celestial channels, down which life flows to us ! which bind our life to the universal material life of nature ; and as a subspecies, merge it in it.

Cold appears to be the natural state or quality of the earth's surface, the home of all our living. The polar coldness evinces it to be inconceivably cold. The fire to warm us nowhere blazes on it. We warm at the fire of another world. This fire evolved from its surface undulates throughout space, the common fire, which vivifies all planetary animation.

It comes to us mixed with another substance not less important to our good, light, with MILTON, "nature's eldest born," which we know possesses most powerful control over the molecular affinity of chemical bodies often determining their forms. Over the vital organic forms it exerts not less power ; plants



and animals etiolate in its absence, and their vital forces languish. It is upon the encephalic tissue its power is mainly exerted. The value and preciousness of this substance, light, to all nature may be infered from the beautiful apparatuses she has flung round the distant planets where it is scarce, to economise and gather it up for their use. To enjoy it, they turn on their axes, and, quavering it in eternal festival, dance round the centre whence it flows. Without the riches of the sun, the earth of herself would not be able to afford a cup of cold water for her children, a useless pauper tenanting useful space. Her chemical fire and volcanic flashes, would only be fit to melt ice or make a noise; not to shape the green grass, to open the flower, to warm the blood, to form and unlock the mystic chambers, and make thought and spirit, and immortality start from breathing matter. All the earth could do, would be nothing without the uranic life, of the instrumentations of which, we will mention a few more. Not only the star of our centre but innumerable others, in regular alternations, dart their influences upon us. Observe the great diameter of our planet's orbit, and how many stars appear and disappear in its different points, all of which in her great annual flight, she visits, and passes by out of sight, taking in fresh food, refreshing her children she carries with her, at every world she passes. Out of how many glittering, burning cups, does our life drink its being! How boundless the intercourse, and the reciprocal influences worlds exert upon one another!! They were not formed, we repeat it, for themselves.

Again:—It is the establishment of the gravitating foci of all the planets, which causes bodies within a certain distance of their surface to tend to their respective centres; the placing of these foci at various distances from one another, and the centre; and the combining all these foci, fountains of stupendous power and movements into one great active focus or centre near the sun's surface, that fixes and regulates the relative weight of worlds the different velocities and densities of their masses, or the length of days, nights and years; and the weight of bodies about their surfaces. In this divine code of laws thus framed to govern, and combine the isolated actions of each planet or of the universe, whose type of movement we have said is circular, all life has a radical interest; and a species peculiar to each part of the heliogarchy is necessitated. Do we not see if these general laws decide the state and condition of chemical bodies, of which, it is highly probable, but not determinable in our present advancement of knowledge, molecular and aggregative affinity, electrical and galvanic attraction, and the polar forces, are only modifications or the local results? do we not see, I say, it is upon these bodies, whose characters and qualities are thus determined, life exerts all its influences, and, in which it manifest itself by organization?

The law of distancing or collocating the planetary foci in space, so that each might sustain within certain limits an equilibrium of action from the central focus, is one of the great primary laws of the universe, which is every thing to life; because, as I have shown, this law regulates the weights of the planets, and bodies about their surfaces. The direct mechanism of this influence upon life, is the alteration of the weight of living bodies, and of those, by which they are surrounded. The influence of these foci, all antiquity have recognised; and to many of the morbid as well as the healthy phenomena, they accordingly gave significant names, as lunacy, menstruation, &c. Nor should we be astonished, when we behold what prodigious influence the combination of these, as the sol-lunar, exerts upon our globe, in the atmosphere and the seas, raising mighty tides, and tending to lift up the solid continents themselves. The principles of our existence, however, to a given extent, are accommodated to the variations of the universal laws; for, in winter we know our globe is much heavier than in summer; and that its weight, as well as the bodies of its surface, sustains often temporary variations from the accidental conjunction of other planetary foci with its own. Besides these temporary variations of the regular weight of bodies on our planets surface and that of its own, which, at the maximum allowing  $X$  to represent the whole amount, will be nearly  $X:3$ ; the difference in the lengths of her polar and equatorial diameters, causes again the same bodies on different parts of her surface, to have different weights. Thus, clocks which beat seconds in London and Paris, require the pendula to be shortened to do the same thing in the West Indies, because their weights are not so heavy there as in the former places. And thus another disturbing force is offered to the dynamical system of the life she nourishes. It must be the same with all planetary life. There are local causes which alter weight, and powerfully affect life. The atmosphere being expansile and contractile by heat, varies its weight in its meteoric states, as is manifested by the barometer. We see it energetically affected in summer and winter by the ever-varying intensity of the uranic stimuli,—the oceans of heat and light flowing from the sun—ebbing over the face of every planet.

In the flood-tides of these flowing streams, life wakes, toils and advances forward; in the ebb, enjoys the brumal sleep. How obedient, how accurately does life play up, and beat time harmonious to the great horologic movements of the universe! Like its planet, it has its summer and winter, its days and nights!

Now if our life be not one with the life of all material globes, with the uranic life, how came impressed upon it the same form of motions, the great horologic, which is the circular form, of which we have spoken? Why, as we have seen, are the actions of life but the continuation of actions begun in, and radiated from, the solar focus? And if, one day, it shall be proved

that molicular affinity, the galvanic and electric attraction and the polar forces, are only modifications or the local and special effects of that great energy, which combines into one great movement all material worlds, the vital forces, then, will claim the same rank, and account wherefore all the beings of nature are clothed with the same sort of action and movement and life; and confirm to the fullest extent, the great truth now well established, that the Divine Creator, from causes the most simple and unique, produces effects the most multiform and variant. In favor of this view, observe the order and dependence of nature. It was not until after the formation of the dry land and the seas and of the effulgent solar globe, that there was life, and, after life, that there was thought, intelligence. This order still holds: mind placed in dependence puts forth its efforts only in concert with the vital forces; and, life again in dependence, acts in concert with the chemical and statical forces of matter. Active, organized, material existence rose first; then life, for we came from the dust, and, lastly, mind. Then forces, then, which animate matter are simple, while the forces of life are double: 1st. those of matter impelling, 2d. its own; and those of mind, tripple, for, besides its own, the two forces of matter and life impel it. In its dynamia, nature's tripple focus terminated all her movements, and all her productive energy. Mind, then, is the highest elaborated of all physical existence, all the energies of the solar system are engaged and active in its production—a flower which blooms here below for another world's immortality.

What we first asserted, then, is true—all life firmly rests, and is predicated upon the forms and properties of matter; and all the varied forms of nature constitute but one great statical unit or whole—one movement undulates the universe, and all beings partake of it and live—live their life varied in all—live and play in the fountain of uncreated vitality. And do we not see, as before urged, that if life consists in the reaction of its own powers upon matter, to which it gives its own peculiar forms, and in which it displays all its phenomena, must not any change in the properties or influences of this matter, be felt and effect changes in it? Hence in nature's order, the perfection of the material preceded that of the vital economy, which fixed the fate and perpetuity of life upon the stability of the material properties.

And again:—We have seen that these properties are determined by the different distances of the planets from one another and the centre, and modified by the different lengths of the planetary semidiameters:—that the accidental combinations of their foci, and their elipsoidal motions, which carry them nearer and sometimes farther from the centre modifying their properties, must act as disturbing causes upon dynamical life. Hence, we see every law which influences the material or uranic economy, likewise influences life, which causes it to play off as above, its actions in imitation of the great celestial horologe.



The forces which urge life, are every where unequal, and in perpetual variation. Not only those of statical matter occasioned by its ellipsoidal movements, &c. but likewise those of the solar effusion, suffer perpetual variations of intensity from the dip of the planetary axes below the plain of the ecliptic. How momentous to life this dip, this southern dip of our world ! how prodigious the consequences of it ! compelling its poles alternately to wheel in the cold shadow of perpetual night, and clothing its surface with climates ;—*momentous*, because solar heat and light are essential and primary, present forces ; and the consequences *prodigious*, because it modifies and impresses characters upon living nature to accomodate these climates. This dip, which of itself divides the earth into so many empires, and peoples each with a peculiar life, evinces, most incontestably, as before, the great superiority of the sun over the other forces. Has this axis changed ? The elder fathers of the lyre, who sung the golden age, portray the beauties of perpetual verdure, and ever-ripening fruits, where winter now holds his reign. Where are the gigantic pachyderma, the rodentia, the last living races of Cuvier ? Has this dip varied and entombed them in the fossil beds, where they are now found ? And have its variations in the night of years been continually pouring new streams of life along the path of time, and blotting out the families the earth once nourished ? All shows that the sun empires supremely over all the other powers of nature in the causation of living existence. And, if all the functions or actions of what lives be but the actions continued of the material universe expressed and epitomised by living organs or organisms, over which we have now thrown a few thoughts, does our physiology, by isolating as it does the vital economy, hold up the faithful and perfect truth ? Nature is simple, is one ; and, if understood, one science would cover all her ground. Is it owing to the crooked way through the senses, we have to look at her ? I will express a great truth : Man looks at his Creator's work with inverted vision, sees not the interior make, decomposes every where into many what is one, and "hews out to himself broken cisterns." An idea is credited by him for a thousand years, another comes and dashes it to pieces. His mind's chronicle shows that his thoughts are entombed, I may say, in a fossil state, in the thick black crust of years as his generations are in that of the earth. The old ideas, *Nature's abhorrence of a vacuum*, the *Pythagorean numbers*, once so popular and familiar, meet us now with the "pale altered visage of another world," "as the awful faces of other times looking down from the clouds of Crawlæ." Why ? Because of our proneness to decompose, to misinterpret, to scatter and isolate, which fetter the growth of our sciences ; and none has suffered more from this abuse than the one we discuss.

Facts should govern opinions, and not opinions, facts. If changes in the general condition of matter are followed by corresponding changes in the world of life, the laws which govern both are, then, universal, and the fundamental doctrines of our author are proven. But let us hear him in his own words :

"All the beings of Nature," says he, "which are offered to our contemplation, belong to the great whole which compose the universe, and are connected to the earth as an integral part of her system. Animal bodies, beside the laws which govern their own economy, are subjected to the influences of all the other bodies of nature. So close and powerful is this connection which binds all physical existence, that living bodies only can live in the presence of those foreign to them, and perish in a moment if isolated from them. Two phenomena characterize the whole living world, *organization* and *life* ; and all material bodies present but two great relations, *vitalisable* (*viable*), and now *vitalisable*. *Viability* or a tendency to organization is the inherent and inseparable property of a part of the matter of our globe. This viability tends to the production of no particular living form, but equally and indiscriminately to the forms of all life."

Like NEWTON's gravity which could not move the new worlds until after the Creator's hand had first impelled them, this viability could not have evolved the living forms at first to impel them through the torrent of ages. The Creative force was necessary to develop the genera and the species—to excite, superintend and give direction to its action, which was to become the proximate cause of all life, through all time.

"Life, in its most general acceptation, is the result of certain operations equally physical, which take place between dead matter and matter animated—is a mode of existence peculiar to matter, and can only exist in it. More strictly, it is the result of the reciprocal action of the viable matter deprived of life or disorganized, upon living organic matter.

Throughout its entire empire, life has its peculiar forms, its modal existences, which have continued unaltered and unalterable throughout time. The forms of a blade of grass, of the bones and integuments of an insect or animal, have been, and will continue the forms of all future generations.

This is the work of the organizing force, the spiritual link, which connects all life with its Divine Creator."—We make no comment.

Of psychological physiology, he scarcely touches the arcana. The mind's acts—*perceiving, comparing, abstracting, &c.*, are the proper *phenomena* for investigation. Of the nature of that which perceives, we never can really know any thing. The properties and actions—the *phenomena* of things, are above the proper objects of our research. The human mind will never

make a revelation beyond the facts. He evinces himself to be a sound philosopher of the school of Bacon.

But to proceed with his history of the life of our globe.

"In the operation of ages, causes take place, whose tendencies are to diminish the amount of life. Since perpetual organization is essential, and one of the great actions of all life, and the atmosphere being the reservoir, the earth's crust or surface becomes emphatically the spacious theatre of the living world.\* The action of the winds, the washing and attrition of rivers, the motion of the tides, the underwashing of the sea waters, causing earthquakes, all tend to the entombing (*enfouissement*) of the viable matter, and putting it beyond the reach of organization and life." Here there is a portion of the *viable* or *organifiable* matter incarcerated in the bowels of the earth, no longer peopling its surface with living forms, and is an abridgement of the aggregate amount of what lives. "Nature in her wisdom and infinite resources, provides means for the resurrection again of this matter to organization and actual vitality."

This *viable* matter, the debris or ruins of what has lived, contains in itself the means of spontaneous combustion. Buried by winds, by earthquakes, &c.—deep in the bowels of the earth, in the course of ages its ignific decomposition begins, and gives origin to volcanoes, by which it is again vomited forth, and thrown upon the surface to run through the endless forms of organization and vitality.

In nature's stupendous economy, volcanoes, which destroy so much life, are useful and indispensable to that very life. They are her great instruments, by which she counteracts the causes of vital destruction, sustains the *organizable* matter on the earth's surface, and keeps the cup of life forever full and flowing.

Those who take pleasure in transcendental physiology, and in the laborious manner in which the Germans study, for whom this work was written, cannot fail to be pleased with the perusal of this volume, and are cordially recommended it.

J. B. G.

JUNE 9th, 1838, TALBOTTON.

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\* 'Tout l'ensemble, All living bodies, says Cuvier, are oxydised or burnt bodies. Organization, therefore, is their de combustion in its first process.—*Rapport des Sciences*, &c.



# INDEX.

*NOTE.—In consequence of a mistake of the printer, in working off the 2nd No. of the present volume without altering the pages of the first, we are under the necessity of giving a separate Index to the first No., and then a general Index to the other eleven numbers.*

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